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Phenomenology in Proper Perspective

HERBERT SPIEGELBERG

Herbert Spiegelberg

The Phenomenological Movement: A Historical Introduction. 2 Vols. The Hague: Martinus Nijhoff, 1960. Pp. xxxii + 392; x + 393-735. Guilders 47.50.

Reviewed by ROBERT B. MACLEOD

Herbert Spiegelberg is professor of philosophy at Lawrence College in Appleton, Wisconsin. Born and educated in Germany, he began publishing with a contribution to Husserl's Jahrbuch *in 1930. He escaped the Nazis by leaving Germany in 1937 and escaped them again by surviving the torpedoed Athenia in 1939. In this country he taught for several years at Swarthmore College and has held visiting professorships at the University of California at Los Angeles. Robert B. MacLeod, the reviewer, is and for fourteen years has been, professor of psychology at Cornell University. He was born a Canadian, but became international after his MA at McGill, through work at Berlin, at Frankfort, and Columbia. For a number of years he was at Swarthmore College before returning (regressing?) briefly to McGill before moving to Cornell. He has been tagged as a phenomenologist of the David Katz type. Fog or no, he has worked on problems of perception, language and thinking with an occasional foray into social psychology.*

PHENOMENOLOGY and Existentialism are words which psychologists have bandied about somewhat irresponsibly. The two movements have a first-cousin or, perhaps better, an uncle-nephew relationship; but there has been so much incestuous inbreeding that one becomes puzzled about the legitimacy of the progeny. We usually associate Phenomenology with Husserl, Existentialism with Sartre; and we dispose of these as philosophy or literature. Then someone mentions that David Katz, an experimental psychologist, was a phenomenologist; and someone else points to Tillich, the theologian, or to Jaspers, the psychiatrist, or to Carl Rogers, the clinical psychologist, all of whom have been listed as phenomenologists or existentialists. If we read *Existence,* (1958), ably edited by May, Angel and Ellenberger, we are led to believe that Existentialism is a forward move in psychiatry. If we read Kuenzli's *The Phenomenological Problem,* (1959), also ably edited, we jump to the conclusion that Phenomenology is an indigenous American product. Then, as all wise psychologists do, we check with Boring's *History of Experimental Psychology,* and we find that Goethe was a phenomenologist and that phenomenology became experimental with Ewald Hering. Köhler, in his *Place of Value in a World of Facts,* (1938), insists that phenomenological analysis is basic to all psychological theory. Gordon Allport in many publications, and notably in *Becoming* (1955) has recognized the importance of phenomenology; and there have been many others. Go to the Boulevard St. Germain, however, or even to Greenwich Village, and you will find bearded beatniks who talk the lingo of phenomenology and existentialism. It is all very confusing.

It is a good thing, consequently, that a competent historian of philosophy has found time to put the whole thing into perspective. Herbert Spiegelberg is one of Hitler's many gifts to American scholarship. He was not one of the original Husserl group, but he was exposed to Husserl in classes, studied with Pfänder, one of Husserl's most distinguished pupils, and subsequently drew upon the Husserl archives at the University of Louvain. There are few American scholars better qualified to write about the phenomenological movement.

For those psychologists who are tempted to think of themselves as phenomenologists, and for those who are not, Spiegelberg's two volumes will be good therapy; for, to be fully understood, psychological phenomenology must be viewed against the background of a wide expanse of philosophy, literature, religion, and even politics. Spiegelberg sketches this background with admirable clarity, expounding the thinking of the major contributors and comparing trends in the various countries of Europe and America. Although the volumes are presumably written for a philosophic reader, the psychologist will find them an invaluable complement to the standard books on contemporary psychological theory.

Spiegelberg rightly speaks of a phenomenological "movement" rather than of a phenomenological "school." There is no "school" of phenomenology any more than there is a "school" of existentialism. There have been streams of thought which seem to have a common source but which have diverged, very much like the Nile at its delta, to form distinctive islands. There is a direct line from Brentano to Husserl to Heidegger, but neither pupil was completely loyal to his teacher, and other streams converged to feed the existentialism of Jean-Paul Sartre. The common source was not a man but a preoccupation with the data of immediate experience *(Erlebnis)* and, to pursue the analogy of the Nile, for the Nile has many original sources, this sort of preoccupation can develop in many different ways. St. Augustine, and later Kierkegaard, Buber, and Tillich, arrived at a sort of phenomenology through the probing of religious experience. Goethe was challenged by Newton's *Optiks,* a book on physics, to write his *Farbenlehre,* which is largely a good phenomenology of color mixed up with some rather bad physics. Hering, Katz, and the Gestaltists, also became phenomenological in their approach, but their reaction was as much against Helmholtz as against Newton. Jaspers, impatient with conventional psychopathological classifications, attempted to recreate the consciousness of the wandering mind. Some of the Nazis tried to pick up phenomenology, perhaps through a misreading of Nietsche, and almost made Husserl—a Jew—an Honorary Aryan. And, incongruously, one of the main streams of phenomenology bubbles up as existentialism in the anti-Nazi French underground.

The common source of phenomenology, to repeat, is a fascination with the facts of immediate experience. To borrow from Katz, it represents an attitude of "disciplined naiveté;" to borrow from Husserl, it requires a "bracketing" of all bias and a cool inspection of the "essences" of experience. Can this form the basis of a rigorous philosophy, as Husserl hoped? or of an enriched psychology? Spiegelberg is modest in his claims for a phenomenological philosophy. Husserl moved farther and farther away from disciplined naiveté and ended up with a metaphysics which is almost esoteric. The counter-movement in philosophy, represented by the early Wittgenstein, will have nothing to do with the inspection of phenomena and finds its answers in linguistic analysis. These are perhaps the two major alternatives in contemporary philosophy. Each movement claims that it is tough-minded and that the other is lost in a fog. Which will survive? Spiegelberg finds some solace in the transition from the early to the later Wittgenstein. "Don't think but look *(schau)*" says Wittgenstein in *Philosophische Untersuchungen.* And Spiegelberg's comment is, "All this sounds surprisingly like the attempts of the earlier phenomenologists to catch the phenomena themselves in their common essences and in their full variety, free from interpretation and without any attempt to reduce them one to another," (p. 670).

This reviewer has often asserted that a good phenomenology will enrich psychology, even thought it may not be a substitute for a science. Spiegelberg reinforces the judgment. If we are to build a science we must first have an awakened curiosity about something. We may be curious about the techniques of controlling human behavior in Walden II, an eminently practical, and perhaps noble, kind of curiosity. Phenomenologists can also become curious about the practical; in fact, Buytendijk wrote a book on the psychology of football (soccer). But as control becomes established, free curiosity becomes cramped. The true phenomenologist becomes bored with the predictable; his curiosity is aroused by the subtler nuances of his own experience, and he keeps wondering what the world is like for the other person.

The literature is rich. Read Brentano again, and read Husserl, Scheler, and Sartre. Spiegelberg gives us a guide to all of these, plus many others, gracefully written and documented by carefully selected bibliographies. This is the best guide to the literature of phenomenology that we have had in any language.

Sèlection à la Francaise

Suzanne Pacaud

La Sèlection Professionnelle. Paris: Presses Universitaires de France, 1959. Pp. 178. 7N.F. + T. L.

Reviewed by Philip H. DuBois

Dr. Suzanne Pacaud is Directeur de Recherches au Centre National de la Recherche Scientifique, and Directeur Adjoint a l'École Pratique des Hautes Études. Polish by birth, she took a doctorate at the University of Cracow before moving to France where she has published extensively on problems of personnel selection, job analysis, accident prevention, training, experimental methodology and aging. Philip H. DuBois, the reviewer, is professor of psychology at Washington University in St. Louis. He spent four years during World War II in the U. S. Aviation Psychology Program and in 1944, as Major DuBois, spent several months in the North African Theatre of Operations helping the French Air Force establish a program to select flying personnel. His experience also includes service as Merit System Supervisor for the State of New Mexico and fourteen years as consultant to the Metropolitan Police Department in St. Louis. In 1957

his book Multivariate Correlational Analysis *was published by Harper's.* (CP, *Oct. 1958,* **3**, *291-292).*

FRENCH work in personnel psychology is sufficiently fertile and sufficiently different from the American variety that it deserves to be much better known in this country than it is at the present time. Dr. Suzanne Pacaud's "Personnel Selection" provides an excellent introduction to the French approach. It would repay the attention of practicing industrial and personnel psychologists, of writers of texts in applied psychology, and of graduate students preparing to demonstrate proficiency in reading current scientific French.

It appears in a series entitled, *Le Psychologue,* edited by Paul Fraisse. Obviously the book is not intended for a mass market, like that of American paperbacks. Somewhat more general in scope and definitely less technical than a monograph, it is more specialized than the typical classroom text. It seems to be addressed to students and professionals who need to know something, but not everything, about a specialty.

Nearly half of the titles listed in the bibliography and a clear majority of the studies described in the text are by J. M. Lahy, R. Bonnardel or Pacaud herself, but there is representation of other French work and some reference to British and American authors. Pacaud has not attempted a definitive survey of the vast literature of scientific personnel psychology, but gives instead a systematic delineation of an approach that is both insightful and objective. Her presentation is illustrated with a wide variety of studies, with many of which her familiarity is first hand. The manifest statistical content is minimal but underneath a smooth-flowing text considerable statistical sophistication is evident.

For a number of years, beginning in the 1930's, Pacaud was a close associate of Lahy, whose pioneer work in applied psychology dated back to 1908. As a result of this association and of her own distinctive contributions, her book represents a long and continuous tradition in the major aspects of personnel research, including job analysis, test development and validation, selection, training, and the psychological study of accidents. As an eloquent spokesman for the scientific tradition in applied psychology, Pacaud skillfully presents a rational framework for personnel selection, based upon rigorous method, yet with full recognition of the social implications of eliminating from consideration many applicants for employment.

PACAUD is skillful in integrating an over-all view of the problems of human relations in industry with the techniques of objective psychology. Test development is an act of implementing investigation of hypotheses resulting from a meticulous job analysis. Validation is testing these hypotheses. Points emphasized include the need for careful test administration, insightful consideration of the nature of the criteria, and avoidance of deceptive pitfalls encountered when the nature of the sample is not clearly understood.

Her faith is firm in the ability of the psychologist to discover job characteristics susceptible of assessment through aptitude tests, often developed with a particular job in mind. Some of the tests (in the reviewer's somewhat free translation) are Test of Divided Attention, Test of Resistance to an Acquired Psychomotor Habit, Test of Changing Direction of Action, and Following Simple Directions at a Specified Rhythm. Names of other tests are more familiar: Aiming Test, Speed of Mental Reaction, and Logical Intelligence. Tests which the French like to call "psychophysiological" are also frequently mentioned, such as Test of Night Vision and Test of Restoration of Normal Vision after Exposure to Bright Light.

In France some of the best work in personnel selection has been carried out in the transportation industry, so that one is not surprised to read of validity studies on locomotive engineers and firemen, switchmen, and common laborers, as well as on punch clerks, accounting machine operators, telephone operators and bus drivers. Her brief description of the duties of a station clerk is a vivid "chemin de fer" picture.

Sightseers in Paris are universally familiar with the tiny autobuses which seem to go everywhere. The visiting psychologist may take comfort in the fact that nearly 40 years of continuous psychological research, used as a basis for rigorous selection and training of operators, has reduced the accident rate markedly, despite enormous growth in other traffic and an 80% increase in maximum allowable speed.

Pacaud is impatient with the superficial investigator, with the false scholar who calls himself a generalizer and with the practicing psychologist who says, "Everything is a test." She presents no brief against questionnaires and projective techniques, but merely states that in personel selection she has not found them useful.

While the systematic presentation of both methods and results in eliminating the unfit from modern industry is impressive, the chief contribution of the book is probably its uncompromising insistence that the use of the scientific method in solving detailed psychological problems is not only compatible with a broad philosophical point of view but is, in fact, its natural corollary.

Refined Prejudice

Charles Herbert Stember

Education and Attitude Change. New York: Institute of Human Relations Press, 1961. Pp. xvii + 182. $4.00.

Reviewed by SIDNEY I. PERLOE

The author, now Chairman of the Sociology Department of University College, Rutgers University, was trained at Columbia and has been, for 15 years or more, focally concerned with the measurement of attitudes and opinion. For some years he worked at the National Opinion Research Center and he now is doing research on the change of those deep-seated attitudes that are embedded in cultural norms. Sidney Perloe, the reviewer, was trained in psychological social psychology at Michigan where he took the PhD in 1958. He is now among Friends at Haverford College and reports himself as feeling unhappy

that experimental research in social psychology, including his own, appears neater than it is significant. He hopes for more good research on social problems or on actual ideological issues.

THE spread of secondary and higher education in our population and the belief that formal education reduces prejudice have led to a feeling of optimism among adherents of egalitarian ideologies. Unfortunately, the data presented in *Education and Attitude Changes* cast a disappointing shadow over these bright hopes for the future. The book is a collation of data concerning prejudice toward Negroes and Jews drawn from 26 surveys conducted by several national polling organizations during the period 1944-1959. The questions selected for analysis are concerned with three aspects of prejudice: acceptance of stereotyped beliefs, unwillingness to grant public rights to minority groups, and unwillingness to accept personal relations with minority group members.

The general conclusion drawn by the author is that education is *selectively* related to prejudice. More educated persons are less likely to believe crude stereotypes, e.g., "Jewish businessmen are shrewd and tricky," than are less educated persons. However, they are just as likely to believe refined stereotypes such as, "Jews are not as good [as members of one's own religious group] in being fair in business."

Some of the most disappointing results are found in a nationwide comparison of college freshmen and seniors. There was little consistent difference between the two groups with respect to the expression of prejudiced opinions. For example, seniors were somewhat more willing than freshmen to accept Jews and Negroes as work partners but somewhat less willing to accept them as neighbors.

Of particular practical relevance is the finding that when prejudice toward Negroes declines with increasing education, it does so only at the college level. Even at this level, the reduced prejudice seems to be present primarily among respondents who have had contact with college-educated Negroes. Contact with Negroes at one's own educational level was related to lower prejudice at all educational levels, although the relationship was strongest at the college level. This finding, taken with the fact that relatively few Negroes attend college and even fewer attend integrated colleges, indicates that an important opportunity for reducing prejudice against Negroes is being wasted. The interaction between educational level and equal status contact also appears to the reviewer to provide some support for the controversial view that improving the quality of Negro primary and secondary education, so that more Negroes can get to integrated colleges, is more likely to result in the reduction of prejudice than altering school boundaries for the sole purpose of putting Negroes and whites in the same classroom (Conant, 1961).

THE conclusions presented in *Education and Attitude Change* must be regarded as tentative for the following methodological reasons, all of which are at least implicitly recognized by the author.

a) Neither comparisons among adults with different amounts of education nor comparisons between groups of freshmen and seniors provide a basis for inferring that attitude *change* is or is not a result of education. It is unfortunate, in this connection, that Professor Stember limited himself to survey data. Newcomb's Bennington study (1957), and perhaps the recent Vassar studies (Sanford, 1956), would have been useful additions to his surveys in providing information about attitude change.

b) Some of the questions, requiring yes or no answers, might have been interpreted differently by different respondents, especially those differing in education; for example, "Are Jews different from non-Jews?" Responses to open-end, depth queries would have been useful in resolving the ambiguity.

c) The study is subject to the potentially confounding effects of differences in the samples in the various surveys examined, and in the short and long term changes of social climate which might have occurred over the period covered by the compilation. For example, the two questions about the business practices of Jews, given above as illustrations, were drawn from separate studies, conducted seven years apart by different organizations. On the other hand, secondary analyses of data compiled from disparate sources are preferable, despite their faults, to the complete lack of integration of research data.

d) Apart from a lonely probability value on page 59 (an insignificant one at that), there is no statistical evaluation of the data. Admittedly, significance levels have little meaning for non-probability samples, but at least some of the data included in the analysis are drawn from probability samples and therefore could be subjected to statistical tests. However, it must be acknowledged that agreement among the findings of several large nationwide probability samples and carefully chosen quota samples might be a far better index of reliability than a p-value of .01 based on a small group of undergraduate volunteers recruited in psychology courses taught by the researcher.

Education and Attitude Change contains a staggering 167 tables in its 182 pages. Yet, due to the clarity of the intervening text and the summaries at the end of each section, the book is not difficult to read. Unfortunately, the tables are not as informative as they might be because all the entries are in percentages. The number of cases on which each percentage is based varies so that it is difficult to evaluate the importance of a given difference. At the very least, marginal frequencies should have been provided.

In summary, *Education and Attitude Change*, despite its methodological problems, deserves attention from social psychologists and educators concerned with reducing prejudice. They will find no definitive answers about the effects of education, but they will be better prepared to formulate hypotheses which have both ideological and theoretical significance.

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Psychometrics Über Alles

Michael Young

The Rise of the Meritocracy. New York: Random House, 1959. Pp. 160. $3.50.

Reviewed by HARRY LAURENT

The author, Michael Young, is a sociologist with a doctorate from the University of London. He has been actively and centrally involved in the affairs of the British Labor Party and in the initiation of the Consumers Association. Along a more academic line he started the Institute of Community Studies at the University of London and, in 1959, was a fellow at the Center for Advanced Study in the Behavioral Sciences. The reviewer, Harry Laurent, is now Social Science Research Advisor in the Employee Relations Department of the Standard Oil Company (N. J.). On his way to his present position he served as a classification and assignment officer in the Air Force, worked as a USES Employment Counselor, did reasearch in Western Reserve's Personnel Research Institute, received a PhD in psychology from Western Reserve, and coordinated the Industrial Relations Planning Division of the Arabian American Oil Company. His present research activities center in the problem of the early identification of potentially successful managers. He has a general and lasting concern that social science knowledge be used in solving industry's problems in relations.

THIS ESSAY is a satirical social history of England from 1870 through 2033 with particular emphasis on changes in the educational system and their effects. The stated purpose is to present the historical causes of workers' grievances in the early part of the twenty-first century; however, the underlying purpose is quite clear. The author cleverly projects current trends in order to argue against a) testing as a means of predicting and controlling behavior and b) to the segregation of students on the basis of ability. He also argues for a classless society.

The author specialized on the 1914-1963 period in the sixth form of grammar school, and much of his background material comes from that era. He is obviously a meritocrat himself and makes it extremely easy for the reader to identify with the intelligentsia.

Today (2033, that is) every member of the meritocracy has a minimum IQ of 125, the 5% of the nation who know what 5% means. Intelligence is defined operationally: the ability to raise production, directly or indirectly. Effort is measured as precisely as intelligence, and intelligence plus effort equal merit (I + E = M). The aristocracy has been replaced gradually by the meritocracy.

For hundreds of years British society had been a battleground between the principle of selection by family and that of selection by merit. True, some would have been selected under either principle; yet, an undue number of sons followed in their fathers' professional or business footsteps. Intelligence had been distributed at random among the classes; during the intellectual revolution it has been redistributed among the classes, and the nature of the classes has changed. The fact of genetic inequality, a simple lesson, is painfully difficult to accept.

Formerly (looking backward, still, from 2033), many well qualified students left school to earn a living. The strain of competitive examinations at age 11 was great, and, once the classification had been made, it was difficult for the late developer to transfer to a different school. Socialists admired the comprehensive schools of the United States, but these schools failed in England for various reasons. The problem with the schools in England was that students were selected on a basis other than merit—their parents' bank accounts. They unashamedly inherited their education and with it their future status in society. Education decided the point of entry into industry; this, in turn, determined where one finished. This educational injustice enabled people to preserve their illusions and inequality of opportunity fostered the myth of human equality.

Pressure for greater equality of opportunity increased to the point that elementary schools were improved, secondary education made free, and the number of university scholarships multiplied. By 1972 dropouts for economic reasons were prevented by paying students 60% above the industrial earnings of people their age. This was expensive but less than had been spent up to that time for those at the opposite end of the scale, and the payout was greater. Also, since the meritocracy could never be better than its teachers, a system was established whereby the more intelligent students were assigned to the more intelligent teachers and the smaller classes.

IN THE PERSPECTIVE of 2023, it can be seen that the rise of the educational psychologist preceded the rise of the meritocracy just as changes in the educational system preceded ability to select students properly. But educational psychology caught up and assumed a central place in education. By 1950 most children were taking tests, and the IQ was established as the chief qualification of the elite. The proportion of people with high IQ's could not be raised but the proportion in activities calling for their full abilities was steadily increased. There were objections to testing. Naturally. But procedures were refined to the point that an infant's intelligence could be tested accurately and the age determined at which it would develop. With these improvements tests became the very instruments of social justice.

In addition, 2033 intelligence is not

an abstraction but an operational concept. The test of the tests is empirical, a statistical question. The results were related to high performance in grammar school, in the university, and in life. Unfortunately, psychologists were slow in devising tests of the tests.

Everyone was encouraged to apply for retesting each five years. If one scored higher than before, his old National Intelligence Card was destroyed and a new one substituted so that no employer or fiancee who wished to view an individual's IQ (or no reader of *Who's Who*) would be aware of his once lower status. This practice of retesting resulted in pressures from children on parents to strive for reclassification. Books on the care of parents were studied avidly.

Industry's hectic and ineffective competition for talent necessitated governmental control over brainpower planning, planning which started with better selection and education from the age of three.

Attitudes towards experience changed also. If selection should be on the basis of merit alone, age should be as irrelevant as birth. Three counterforces helped to overcome the gerontocracy: pressure from the better educated and, therefore, more confident young people; support from oldsters who had lost their places on the ladder; and the improvement of merit rating to the point where it could replace seniority as an objective measure.

Changes in education and industry brought changes in class relationships. Most members of the lower classes have accepted the standards by which they are judged. They know they have had every opportunity. The situation has been saved by the development of an esteem for physical achievement, the policy of retesting, hope for better things for children and grandchildren, the stupidity which assigned the lower classes to their status, changing job titles from Workers to Technicians, and the development of a Pioneer Corps to do the menial work.

Since 2005 everyone has been paid the Equal. Differences in contribution to the organization are compensated by the awarding of extras, including domestic servants, which free the meritocracy for the work they were trained to do.

THIS THEN, is the background of the crisis of 2033. The degree of resentment of the lower classes could not be determined because the stupid were also inarticulate. Contributing factors were not associated entirely with the lower classes and included the disparity between the intelligent woman's vocational function and her desire to be a wife and mother, problems involved in the adoption of intelligent children, teachers' reactions against ability segregation in kindergarten, and agitation of some reactionaries to make the meritocracy hereditary.

Little was anticipated from the uprising. Effective leadership was lacking. It consisted of women meritocrats, older men retired from power, and a few members of the lower class. However, events proved that even a sociologist can be wrong. A footnote indicates that the author was killed in the uprising.

The essay's thesis is summarized in a manifesto issued by the Technicians' Party in 2009. The Technicians' goal is a classless society. They seek equality in the sense that they want every man to be respected for the good that is in him. They would consider not only one's intelligence, education, and power but also his kindness, courage, sensitivity, and as many other qualities as necessary. Everyone, then, would have equal opportunity, not to rise up in the world in the light of any mathematical measure, but to develop his own special capacities for leading a rich life.

This is a persuasive book. Most readers will probably agree with many points ably made. However, the major thesis is difficult to accept. Consideration of qualities other than intelligence, education, and power is no guarantee of a classless society, an observation illustrated by various cultures throughout the world. It is also unlikely that such sharp class distinctions would exist unless one were willing to draw fine lines through the merit continuum. Then, too, industry has not been, nor is it likely to become, the sole determiner of class status. Other organizations—church, family, community—do, and will continue to, reward other qualities.

Another questionable feature lies in the projections. Trends in measurement and education seem to be projected on a straight line; educational and industrial psychologists have attained outstanding success in the measurement of intelligence and effort. If this is so, it would seem reasonable that social psychologists and sociologists should be equally successful in solving the resulting social problems.

Perhaps during the next 70 years the described accuracy of intelligence measurement will be reached, but this is questionable. Even so, it is doubtful whether intelligence test scores alone will predict perfectly a realistic criterion of success unless considerable self-validation of the results is built into the situation. There is no evidence so far that managers will allow this to happen. They will probably insist on comparable efficiency in the measurement of additional variables which they consider important.

It is unfortunate that the author of this essay was killed in the Peterloo uprising in 2033. Fortunately, however, no one took the liberty of revising his manuscript. The book is excellently written and makes delightful and provocative reading. It is recommended for anyone with an interest in trends in education or in the reward systems of business and industry.

Counsel on Counseling

L. H. Lofquist and George N. England

Problems in Vocational Counseling. Dubuque, Iowa: Wm. C. Brown, 1961. Pp. xxii + 186. $3.50.

Reviewed by CLIFFORD S. KNAPE

The authors, Lofquist and England, are both Minnesota PhD's, were both trained by the late Donald Paterson and are both professors in the Department of Psychology at Minnesota—

Lofquist as a counseling psychologist and English as an industrial one. Each has produced a book separately and together they published the monographs Minnesota Studies in Vocational Rehabilitation. *Clifford Knape is chief of the Vocational Counseling Service in the Waco, Texas, Veterans Administration Hospital and, at the same time, is adjunct professor at Baylor University. He had his doctoral work in the Department of Educational Psychology at the University of Texas, has served as a Proficiency Measurement Specialist in the Air Force during two wars, and is now president-elect of the Texas Rehabilitation Association.*

THE purpose of this tautly-designed book is expressed in its subtitle, *The Application of Research Findings.* The authors have organized significant and thought-provoking data under forty-six problem areas in vocational and rehabilitation counseling.

Use of research findings in the practice of any profession is slow and sporadic. When practitioners vary greatly in professional preparation and current exposure to research reports, the resultant time and content loss is magnified. Increasing need for vocational counselors in our culture has led to expansion of training facilities and proliferation of research. "It is high time for a problem-oriented book to appear on the scene," Professor Paterson points out in his cogent introduction to this book.

The problem areas range from armchair to office-chair topics. Definition of counseling, reinforcement of verbal behavior, status of counselors: this warp is woofed with such technique-topics as the Oral Trade Test, report writing, and construction of test profiles. The author's concern with rehabilitation counseling is clearly evident—eighteen of the problems involve this specialty. For each problem, facts are given and specific questions are discussed. Discussion length varies from one page (report writing) to ten pages (definition of counselor). References to the specific sources are cited, and related references are frequently shown. An appendix correlates the problems with sections of thirty texts on counseling.

The authors define vocational counseling as "a continuous learning process involving interaction in a nonauthoritarian fashion, between two individuals whose problem solving efforts are oriented toward vocational planning . . . not only (for) solution of the immediate problem but also . . . (for) new techniques for meeting future problems." Psychotherapy "may result in some measure" but the focus remains on vocational planning. This definition is likely to be viewed as unnecessarily restrictive, especially by counseling psychologists in rehabilitation specialties. The authors defend this view very capably, however, by asserting that the vocational counselor "must attend to a vocational-problem configuration against the total adjustment background of the individual," and "if the total background permits no crystallization of a vocational set of problems, perhaps . . . the situation is not one that is feasible for the special competencies of the vocational counselor." Dissatisfaction with this definition, on the part of rehabilitation counselors, may quite possibly stem from particular idiosyncrasies of position or assignment rather than essential defects in the definition itself. For example, a rehabilitation counselor in a neuropsychiatric setting may well be defensive about the incidental role of psychotherapy in the suggested definition.

The problems in the area of ethics involve the pressures vocational counselors feel to enter into deeper relationships with counselees. One problem describes a counselee who shows signs of extreme anxiety and for whom a referral to a clinical psychologist or a psychiatrist seems to be an obvious precedent to any vocational planning. The nearest clinician to whom referral could be made is thirty miles away. The APA standard applicable to this problem is cited and the problem is easily solved. Note, however, that semantic guideposts of *extreme anxiety* and *an obvious precedent* are not operationally available to the counselor. Substitute the words *anxiety* and *a desirable precedent* for the guideposts, and the clearcut nature of the solution vanishes. Does the solution now hinge on geography instead of ethics? Obviously not, but wherein lies the distinction? Perhaps ethical problems cannot be verbalized nor solved on paper, but this reviewer would have preferred a broader series of ethical problems and a more detailed discussion of this area. Of course, this is carping, as the authors specifically disclaim encyclopedic coverage or final solutions.

This book will be useful to vocational and other adjectivally-described counselors in many settings. The approach is stimulating, and the discussion encourages thought, further reading, and further research. While such encouragement is patently the hope for any professional publication, this book seems to achieve the aim more than do most. To check this effect, the reviewer asked advanced counseling students to consider several of the problems. Lively discussion ensued, with fine individual involvement on the part of each student. It is believed that this will be the experience of most readers, in or out of classrooms.

Belaborers wary of their ire sometimes end a review with a tongue-in-check attitude, commending the publication as useful or interesting or well-bound. This reviewer has no such motives but he makes the same noises: this book *is* useful, it *is* interesting, it *is* well-bound, and it *is* a valuable book for all current, would-be, or has-been counselors.

Search for Mainsprings in Collective Behavior

Kurt Lang and **Gladys Engel Lang**

Collective Dynamics. New York: Thomas Y. Crowell Co., 1961. Pp. xii + 563. $7.25.

Reviewed by DWIGHT W. CHAPMAN

The authors, a husband and wife team, are sociologists who teach at Brooklyn College and who have earlier published on problems of mass communication. Dwight Chapman, the reviewer, is chair-

man of the psychology department at Vassar College and by now is an old hand at reviewing for CP (CP, *July, 1957,* **2,** *192-4)* (CP, *March 1960,* **5,** *95f.)* (CP, *Sept. 1960,* **5,** *304). After trying, more than 20 years ago, to teach some statistics to the present editor of* CP, *he turned from the more academic pursuits to a concern with practical social psychology in various operations during and after World War II. He did return to an academic setting but not to psychophysics and statistics. His interest in collective behavior is consonant with his general involvement in social psychology and with a special interest in disaster research.*

THE CONCEPT of *collective behavior* is undoubtedly less familiar to psychologists than to sociologists. As a technical term it designates, in the words of this book, "patterns of interaction characterized by relative spontaneity, transitoriness, and volatility" as against "the more clearly articulated, durable, and institutionalized forms with which so much of sociology is concerned." It embraces, that is, social phenomena that are less predictable from a knowledge of enduring or prevalent social structures than would be bureaucratic behavior or role-enactment within the family, but that are nevertheless sociological in interest and domain because they are not simply a function of the psychological dispositions of individuals.

As a recognized field of sociology, collective behavior has been marked out for nearly the last forty years. What is of interest to social psychologists in this book, however, is the mission of the authors: to reorient collective behavior towards concepts of the dynamics that make it happen and away from the rather sterile classificatory terms that have so long embalmed a potentially lively subject. The opportunity for this is ripening; and it is a virtue of the book that it demonstrates that the time is by no means too early for a worthy attempt. The sources for the empirical substance of the field lie in the many investigations by sociologists, social psychologists, and the interdisciplinary breed that resist either classification, of phenomena like mass movements, crowd and mob episodes, disaster behavior, collective conversions of belief, and the many other adventitious social events that have been studied not for the sake of illuminating the constancies of large social structures but to make more intelligible events that take place somewhat outside—even, indeed, in spite of—the stability of roles and expectations in the wider society. The number of such studies has been mounting rapidly in the past couple of decades.

It is a formidable enterprise to bring conceptual order into a field whose concrete examples sprawl from battlefield panic on the one hand to religious revivals on the other. At the level of basic processes common to all such phenomena, the Langs have developed five governing notions: (1) collective definition, the effort to gain through rumor a cognitive clarity that is not satisfied by official information; (2) demoralization, in the sense of the retreat from prevailing societal goals towards more restricted and private aims that conventional values have failed to satisfy; (3) crowd behavior, centering around the crowd's collective defense against the control of conventional norms; (4) conversion, in the sense of marked and rapid change in shared beliefs and norms; and (5) crystallization, or the occasional tendency of collective behavior to stabilize around some nucleus of leadership persistent enough to bring about some long-term changes in the wider social economy.

Whatever basic principles are applied to collective behavior—and these principles are applied with considerable success—the sociological job in hand is to account for the conditions under which people, who are normally functioning in groups and masses that are widely open to the large social system, come to function for a time in some emergent collectivity that is largely closed to the surrounding system. The job of the social psychologist is somewhat different, however. Since, for him, the openness or closedness of the social situation with respect to the total system is not of much concern, his interest in collective behavior is lively for another reason. Collective behavior furnishes him a social laboratory in which the conditions affecting the social conduct of the individual are particularly close at hand for observation, and in which these conditions wax and wane within a relatively short time so that their effect can better be isolated.

For this reason, the comprehensive range of social situations covered by *Collective Dynamics,* the well described case studies that it uses for illustration, and the thoughtful interpretations that it offers make it a book that can be very profitably read by students in any course on social psychology, quite aside from its merits as a provocative textbook in its own field.

Decisions, Decisions

Warren S. McCulloch (Ed.)

Human Decisions in Complex Systems. (Annals of the New York Academy of Sciences, Vol. 89, Art. 5.) New York: New York Academy of Sciences, 1961. Pp. 715-896.

Reviewed by JESSE ORLANSKY

Warren McCulloch, the editor of this group of papers, is a physiologist and physician who has taught psychology and is widely known for his work on the functional organization of the central nervous system. Jesse Orlansky, an industrial psychologist with a Columbia PhD, was for a number of years vice president of Dunlap and Associates and is now at the Institute for Defense Analysis where he is concerned with military planning.

THIS MONOGRAPH contains 12 papers prepared for a conference on *Human Decisions in Complex Systems,* held by The New York Academy of Sciences in 1960. The papers, which are more or less related to human decision making and to complex systems, deal with such topics as levels of decision making, psychophysics, stochastic learn-

ing, risk taking behavior and the reticular formation of the brain. Experimental data are reported in about half the papers. The purpose of the conference is not described and there is no preface, summary or conclusion to the monograph.

Some of the papers are excellent. Lawrence Fogel shows that it is essential to provide a set of descriptive measurements for the decision tasks to be accomplished throughout a man-machine system and offers a model based on the concept of intelligence level rather than amount of information. Sidney Siegel reports a decision making model, supported by experimental data, in which the person's strategy varies as induced reinforcements are varied. L. H. Van der Tweel shows that there is a more or less linear electro-physiological response to the lower frequency of light inputs which may be recorded even below the subjective threshold.

However, it is obvious that the monograph lacks organization and a central theme. The "complex systems" include man-machine systems, psychophysics, stochastic learning in rats, and a variety of physiological processes. Apparently, any complex, time-dependent process would qualify as a human decision making process. The monograph reminds one of the airplane once described as a bucket of bolts all going more or less in the same direction. If this monograph had a pilot, I judge it also needed a navigator.

State of Visual Research in 1958

National Physical Laboratory

Visual Problems of Color: Symposium. 2 Vols. New York: Chemical Publishing Co., 1961 (first published 1958 by Her Majesty's Stationery Office, London). Pp. 395, 367. $8.50.

Reviewed by HOWARD D. BAKER

CP's biographer throws up his hands at any symposium, and where one is international, multidisciplinary and two-volumed, the retreat is utter and hearty. This symposium, however, has a single reviewer and though he is multi-faceted he properly can be given a paragraph. He is Howard D. Baker, of the psychology department of Florida State University. He took his MA with John Paul Nafe at Washington University and his PhD with Clarence Graham at Columbia. After Columbia he went to Johns Hopkins where he did colorimetry and color research for two years before moving to Tallahassee. He is now a member of the NRC Armed Forces Committee on Vision and plans to spend the year 1962-1963 in the Physiological Laboratory at Cambridge, England.

IN 1958 the National Physical Laboratory at Teddington, England, broadened its regular series of physics symposia to include a number of biophysical topics. The present volumes on vision and color are a transcription of the first such symposium on a biophysical topic. The report was originally published in 1958 by Her Majesty's Stationery Office for the Laboratory. Now the two volumes have been reprinted commercially in the United States. The reprint includes all of the original material, and in addition the first volume includes E. H. Land's two controversial papers on color vision. Land's papers were originally published in the *Proceedings* of the National Academy of Sciences of the United States.

As is true of most published symposia, this one is a group of independent papers such as would normally be found in the technical journals. What sets this symposium above the usual run is its really international character. Eleven countries are represented, and there are nearly as many Russian papers as American. Fortunately everything is printed in English.

An entire session of the meeting was devoted to a long paper by George Wald, presented as a memorial to the late Selig Hecht. It deserves special mention. Wald gives here a rather comprehensive statement of his views on the role played by photochemical processes in visual functions. It displays Wald's clear and impressive style and it is sufficiently polemic in tone to be amusing and forceful. Blows from critics of the photochemical point of view appear to have been felt. Wald pays much more attention to non-photochemical factors now than he did a decade ago. The present product, again, is a convincing theory.

Several other papers on visual pigments follow Dr. Wald's. They make it clear that the topic has become one of great biochemical complexity, but from the complexity has emerged a clear hope that the problem of human color vision is near a physiochemical resolution.

Much attention has been attracted by W. A. H. Rushton's astonishing feat of measuring the characteristics of visual pigments in the eyes of living persons. Most of the papers make reference to Rushton's research, and it is considered to promise a definitive answer to color vision in the near future.

THE biochemical papers are largely British and American. The remainder of the first volume and the first half of the second is devoted to the more traditional psychophysical approach to color. The papers here are of that sort which is the despair of the non-specialist in color, because of the specialized background in colorimetry which they presuppose. Suffice it to say that these papers do not appear to be converging on any particular problem.

It is interesting that the authors of the psychophysical and colormetric pa-

pers are more international in character than either the biochemical sections which began the symposium or the electrophysiological section which closes it. (This latter section is irritatingly absent from the Table of Contents of Volume II, by the way, although its subject matter is listed in detail on the dustcover.)

The Russians play a considerable part in the symposium. Their research is psychophysical and is surprisingly traditional in approach. Their sources and references are largely from western literature, and are familiar and current. There are some surprises; for example, there is the jolt of having some of D. B. Judd's meticulous work dismissed as "groundless." For the most part, however, the Russians appear to be adding bricks rather than surveying foundations.

It is regrettable that the publisher chose to add the two extraneous articles by E. H. Land. Of course these are the famous ones, reporting his original color experiments and his very original interpretations. It is true that they have caused a great stir in academic circles. For the most part the stir has been among scientists who are not familiar with the literature of color research, and who are unaware of the possibilities inherent in contrast effects and two-color mixtures. To include the Land articles without any of the subsequent careful discussions about them is to perpetuate a debatable claim to importance.

With the above possible exception the reprinted symposium forms a really fine survey of the state of visual theory in 1958. The volumes include contributions for many of the best visual scientists in the world, who represent several countries and several academic disciplines. An outsider curious about current visual research could do no better than start with this symposium. A vision specialist should be warned that he will regret it if he fails to buy the books.

Despite all the differences the unity of mankind will assert itself irresistibly.

—JUNG

Global Charting of Personality

Bert Kaplan (Ed.)

Studying Personality Cross-Culturally. Evanston, Ill.: Row, Peterson, 1961. Pp. ix + 687. $8.50.

Reviewed by JAMES BIERI

Bert Kaplan, who edited and contributed to the present volume, is Associate Professor of Psychology at the University of Kansas. He has had a long fascination and involvement with cross-cultural matters. After receiving his doctorate in Social Relations at Harvard, he has done field work among the Navaho and Zuñi Indians, has edited Primary Records in Culture and Personality, *has authored, with T. F. A. Plaut the book* Personality in a Communal Society: An Analysis of the Mental Health of the Hutterites, *and has published a number of researches dealing with the cross-cultural use of projective techniques. The reviewer, James Bieri, is Associate Professor of Clinical Psychology in the New York School of Social Work, Columbia University. After receiving his doctorate at Ohio State he consorted with anthropologists and sociologists in Harvard's Department of Social Relations before crossing into the culture of social work. He has published research in a number of aspects of personality and personality development. Now he is interested in the process of clinical judgment and is studying the relation of psychosocial factors and cognitive behavior.*

THE study of culture and personality is as old as modern psychology itself, having drawn the attention of such early stalwarts as Wundt, McDougall, and Freud. This has been a cyclical history, marked by theoretical ferment, zealous hopes, and vexatious despair. Like an over-age prizefighter, cross-cultural analysis has been counted out repeatedly by its critics, only to return with renewed vigor to plague its opponents. The present volume is noteworthy because while it reflects this history, it also attempts to forge ahead and benefit from this mixed heritage rather than merely to perpetuate it.

Doing this in a compendium form is no easy task, particularly when 30 contributors to 24 chapters are involved. But Kaplan has used this scope well to provide us with some insight into where this field has been, what it has tried to do, how well it has fared, and where it should be going. With his considerable background and involvement in this field, one senses that the years of labor in assembling this work have had a sobering impact on the author and that he was unduly modest in terms of the space he gave his own observations.

For Kaplan makes it clear in his epilogue to this volume that he is dissatisfied with what has gone before, both in terms of method and theory.

There has not been a realization of the naive hope that the approaches of yesteryear were equal to the task of delineating the subtle interplay of personality development across differing cultural contexts. The breadth and detail of this history are spelled out in lucid detail by Milton Singer in the initial chapter. Two major theoretical currents are evident. Starting in the 1920's, the grand alliance between anthropology and psychoanalysis provided a stormy proving-ground for such protagonists as Malinowski and Roheim. Subsequently, theories of *typical personality* structure in different cultures were developed by Benedict, Kardiner, and DuBois, this emphasis finding its most recent expression in the various concepts of na-

tional character. Bedeviled by circular reasoning, conceptual confusions, and methodological difficulties, these global formulations have led many workers to seek other theoretical pastures for their nutriment.

Particularly noteworthy are the theoretical chapters in this book which attempt to provide alternative formulations to the idea that social structure and personality exist in terms of what Kaplan refers to as isomorphic or symmetrical relations. That is, the belief that social structure supports a predominant pattern of personality functioning is giving away to the recognition that many specific patterns of individual motivation may articulate within a given social structure or social movement. Devereux stresses this point in the context of analyzing studies of the diverse motives of Hungarian freedom fighters. Such a notion probably requires new concepts dealing with the interaction between individual motivation and role behavior, for as Kaplan states: "if taken seriously, this idea is incompatible with modal personality theory." While both Spiro and Parsons, in separate chapters, broach this problem in discussions of social structure and personality, Spiro in particular emphasizes the need for greater versatility in concepts to bridge these two domains.

PERHAPS the most provocative theoretical chapter is the attempt of Anthony Wallace to provide a cognitive approach to what he terms the "psychic unity of human groups." By employing concepts strikingly akin to recent developments in cognitive personality theory, Wallace advances the concept of *mazeway* as a structural property of cultures which may provide an analysis of such system properties as differentiation, complexity, and organization. These properties focus on the facilitation of social participation within and between social systems. A further stimulus to the development of theory is provided in Hymes' chapter on linguistic aspects of cross-cultural personality study. In a well written and comprehensive piece, Hymes reviews what has transpired in the thirty-five years since Sapir provided an impetus to this area

BERT KAPLAN AND NAVAHO FRIEND

of study. Here again, it is evident that earlier hopes for a simple one-to-one relation between language and nonlanguage behavior were unfounded, and that there is no consistent evidence as yet for the importance of linguistic relativity.

It is interesting to observe that with the exception of Sears' rather brief discussion of aggression, dependency, and competition as transcultural variables and Daniel Miller's combined Lewinian and Freudian discussion of personality and social interaction, most of the theoretical contributions to this volume come not from psychologists but from anthropologists and sociologists. In part this is due to the singular omission of learning theory as an approach to cross-cultural analysis, particularly as exemplified in the work of the Yale group including Dollard, Whiting, Child, and Sarason. Recognizing this, it is still evident that psychologists have not provided the theoretical innovation in culture-personality study which might have been expected.

IN PART, this theoretical egocentrism may be due both to psychologists' greater caution in generalizing concepts beyond the border of reliable empirical evidence and to their greater preoccupation with assessment methods. This crucial role of empirical methods in cross-cultural study is the second major focus of this volume. Again, traditional methods have been found wanting, particularly projective techniques. This stems not only from the faulty theoretical contexts in which they were employed, but also from basic difficulties in personality assessment including excessive reliance on a few poorly validated projective tests, demanding too broad interpretations of these tests, generalizing unduly from norms in our own culture, inadequate sampling, and ignoring situational influences in responses to tests. William Henry in an analysis of these problems, suggests as one corrective a greater reliance on behavior-sample methods such as the TAT or sentence completion. However, Kaplan's chapter on this same topic contains a caution which cannot be overemphasized: "The idea that the personality characteristics of a people can be studied simply by the adminisration of a single test like the Rorschach seems to me to be a complete illusion. Such a procedure may yield interesting information; but the information will inevitably be fragmentary and not susceptible to integration into a serious culture and personality study." The fact that several chapters of this volume represent this single-method approach indicates how persistent our habitual forms of research behavior can become.

The volume does contain, however, suggestions for new directions in this regard. Roger and Louise Barker's chapter on psychological ecology of children in one community in the United States and another in Britain offers interesting leads as to differences in these two culture settings concerning the relative saliency of children in community activities. This approach gets to a core problem plaguing much personality-culture research, i.e., how to obtain meaningful, representative, and reliable behavioral observations. In this regard, G. Morris Carstairs has a sensitive analysis of problems in psychiatric interviewing in other cultures, and Dorothy Eggan explores the largely untapped potential of dreams as a source of data in cross-cultural studies. While the increasing use of objective personality tests is not seriously considered in this volume, it is apparent that at least tentative starts are being made to achieve rigor and significance in personality assessment in this field.

Inevitably, the scope of this volume invites comparison with the earlier work of Kluckhohn, Murray, and Schneider *(Personality in Nature, Society and Culture)*. Kaplan's book is best seen as a complementary work. It is more up-to-date (most of the chapters were written expressly for this volume) and gives a greater sense of immediacy in understanding the relevance of the history of this field to the present as well as indicating significant trends in terms of method and theory for the future. One comes from this work with a sense that culture-personality study has served the function of reminding psychological science of its broader obligations to extend and develop conceptual approaches that relate man's behavior to the social realities of his existence. It will be interesting to see how we measure up to this task.

Answering the Cry for Help

Norman L. Farberow and **Edwin S. Shneidman** (Eds.)

The Cry for Help. New York: McGraw-Hill, 1961. Pp. xvi + 398. $9.95.

Reviewed by SVEN LUNDSTEDT

The editors, Farberow and Shneidman, are co-principle investigators at the Veterans Administration central research unit in Los Angeles, and members of the faculty at UCLA. Individually and together they are authors of several research articles on suicide, and co-editors of Clues to Suicide *(McGraw-Hill, 1957). The reviewer, Sven Lundstedt, is Assistant Director of the Foundation for Research on Human Behavior in Ann Arbor, Michigan. He has a major interest in programs concerned with the mental health of communities, and recently reviewed for* CP *the monographs* Community Resources in Mental Health *and* Epidemiology and Mental Illness (CP, *September 1961,* **6,** *306).*

"EACH YEAR approximately eighteen thousand persons in the United States commit suicide." So begins this book, a valuable manual for practitioners, which explores several social and psychological facets of suicide. The editors urge that the incidence of actual and attempted suicide can be reduced by research and professional care, and ways of proceeding in the community are discussed.

Those seeking alternative approaches to the clinical problems of suicide will be interested by the possibilities in the program of the suicide treatment center the book describes. The center, similar in structure to the out-patient community mental health clinic, is an important innovation because it demonstrates concretely the fact that a program of primary, secondary and tertiary prevention at the community level is both feasible and practical. Recognizing the value of several kinds of preventive intervention, the center not only tries to reduce suicide by early case finding and psychotherapeutic care, but also supports preventive measures focusing on conditions in the environment which lead to suicidal behavior. A leading virtue of the center is its research unit which provides important feed-back for program development. Fortunately, this unit is looked on as a necessity and not a luxury.

Professional workers who regularly assist people in a suicidal crisis will find of interest the chapters on emergency evaluation and on assessment of self destructive potentiality. Presented here is a guide to be used in finding out how much self destructiveness there is in a person. The schema used is a helpful way of organizing clinical data about suicidal individuals, but may, however, prove rather crude if used alone as a

An essential reference text

PSYCHOLOGICAL TECHNIQUES IN DIAGNOSIS AND EVALUATION

Theodore C. Kahn, Ph.D., *Chief, Psychological Service, U.S. Air Force Hospital, Wiesbaden, Germany*

Martin B. Giffen, M.D., *Chief, Psychiatric Service, U.S. Air Force Hospital, Wiesbaden, Germany.* Virtually all the techniques and tests clinical psychologists use as aids in the diagnosis of mental disorder are described in this volume. It is an essential reference for all psychologists and psychiatrists as well as professionals outside the field of psychology (sociologists, teachers, physicians, lawyers, etc.) whose work requires some knowledge of clinical psychological techniques.

Among the tests discussed are the Rorschach, TAT, KTSA, apperception tests, the Wechsler Bellevue test, intelligence tests, aptitude tests, the Piotrowski Signs of organic brain damage and many more. The compact and lucid exposition facilitates reference and allows the widest possible use by specialists as well as workers who may have little background in clinical methods.

Among the not-previously-published features are:

New psychological test signs of borderline and incipient schizophrenia

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Full discussion of how clinical psychology methods aid neurosurgeons in the identification of brain damage

Complete treatment on how neurosis is reflected on psychological tests

Contents: Clinical psychology and medicine; Psychologists and their tests; Normals, character disorders, and differential diagnosis; Intelligence; Methods for testing and evaluating organic brain impairment; Identification of schizophrenia; Assessment of neurosis; Evaluation and testing of children; Psychological tests in vocational and educational guidance; Reporting the psychological findings. Bibliography.

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measuring instrument. One wonders why there is such a conspicuous absence of discussion about other important supporting techniques such as projective tests.

There is a discussion, though inadequate, of the role of social scientists in medicolegal certification of death from suicide. The assigned roles and role functions of the suicide team are not fully explored. Unanswered are many questions about ways in which the wide range of research skills of social scientists could be used. (Only psychologists, psychiatrists, and social workers are mentioned as social scientists; there is no mention of the possible contributions of sociologists and social anthropologists.) An especially helpful chapter presents data from an epidemiological and sociological survey of actual and attempted suicides. Such data can be very useful as a base line in planning new community programs. Other chapters present a variety of clinical data about the behavior of suicidal patients. On the whole, however, the quantitative data in the book are limited. There is a discussion, again very limited, of the problem of preventing the reoccurrence of suicide attempts following intensive treatment and hospitalization. Rehabilitation through after-care services is only sparingly described. If, as we are told elsewhere in the book, there is constant danger of suicide for some even after hospitalization, then would not a need exist for a greater range of information about after-care? Such information would be helpful to many clinicians. Other chapters in the first half of the book present a taxonomy of death, and a brief description of special agencies organized for the prevention of suicide.

The second half of the book begins with the clinical case history of an attempted suicide. It forms a theme, or motif, which is analyzed by several clinical practitioners. Represented are spokesmen for Freudian and neo-Freudian theories, Kelly's personal construct point of view, and Rogers' nondirective theory. The reader will be impressed that consensus about the psychodynamics and treatment of a suicidal personality is difficult to achieve. Farberow tries to show in his helpful analysis some similarities in approach, and reviews for the reader some unresolved problems associated with the psychotherapeutic treatment of suicidal individuals.

The final section is a very good bibliography on suicide, covering the period from 1897 to 1957. Titles are grouped under four headings: psychological-general, sociological, medical-legal, and philosophical-religious. Although the quality of this book is not consistently high throughout, practicing clinicians, researchers and others who work with the problems of suicide will find it generally very useful.

The Mentally Retarded as Students

Malinda Dean Garton

Teaching the Educable Mentally Retarded: Practical Methods. Springfield, Ill.: Charles C Thomas, 1961. Pp. xiv + 233. $7.50.

Reviewed by LUCILLE SEXTON

Malinda Dean Garton, now concerned with the teaching of teachers of the educable retarded and now located at Illinois State Normal University, received a bachelor's degree from the University of Oklahoma and an MA from Colorado State College. Lucille Sexton, the reviewer, is Assistant Professor in the Department of Special Education in the College of Education at the University of Alabama. She obtained her doctorate in the Department of Educational Psychology at the University of Texas and, except for a period as a school psychologist in Houston, Texas, has since worked continually in the area of the mentally retarded.

THE CLASSICAL objectives of education—self-realization, social competence, economic efficiency, and civic responsibility—have been set forth by Garton as the basis for the curriculum in teaching the mentally retarded. In this instance there is the implied assumption that the student who is mentally retarded learns just as does the student with average intelligence, the only difference being that the optimum level of learning for the mentally retarded is less than that of the student with average intelligence. In light of that assumption, the curriculum presented in Garton's book is valid in that it consistently presents an academic level of expectancy. This approach to curriculum should be identified as one approach which currently is accepted by major programs for the retarded in public, private, and parochial schools. Much of Garton's approach, and of others like it, is based on class theoretical reasoning in that there is no differentiation between children and youth, no recognition of differences in etiology and no appreciable recognition of individual differences.

From a positive frame of reference this book presents a step-by-step delineation of a curriculum in terms of writing, spelling, music, art, and arithmetic. The approach could be interpreted as a "watered-down" curriculum; however, its presentation of the unit approach to teaching the retarded seems to indicate that in practice the author does not use such an approach. Educators, in the area of mental retardation, generally are in agreement that effective use of unit teaching must be developed over a period of years and with some professional sophistication. The curriculum materials presented by Garton provide a valuable source of reference for the more experienced teacher of the mentally retarded as well as for the teacher new to the area.

Garton's presentation of the section on arithmetic is one of the better available within the current literature. In the opinion of the reviewer, based upon experience and interpretation of recent research, sequential development of numerical skills and concepts with reference to mental age is the only feasible approach to effective learning for the retarded. The above statement is not qualified due to the fact that without regard to mental age, numerical skills and concepts will not be developed except on a rote basis. The methods and techniques which Garton presents seem

to have been developed over a period of years in what appears to be action-type research.

From the negative frame of reference, the philosophic approach to retardation, the first sixty-six pages of the book, does not verbalize adequately what the curriculum portion implies. Selected statements from that portion of the book are analyzed as illustrations of this discrepancy.

The following statement was made in relation to the high school group, whose chronological age range was identified as fifteen to eighteen years: ". . . their experience and maturity, plus the habits they have been carefully taught, result in better cooperation with supervisors and the start of inner control in preparation for cummunity living." In the experience of the reviewer, should the teacher not help to establish within each student, or provide an environment which helps to promote inner control within each child from his initial entrance into the special education program, it is difficult, if not impossible, to establish such control in mentally retarded individuals in terms of group participation at the above noted ages. Garton further stated, "teachers should realize, however, and prospective employers should be aware of, the probability of relapse under tension, and frustration." It seems reasonable to this reviewer, to assume, on the basis of vocational rehabilitation data, that these factors may be mitigated or alleviated with the proper articulation of the terminal class program (high school program) and rehabilitation and with job placement by the Vocational Rehabilitation Counselor or by the classroom teacher.

Garton later stated, "the children must complete their assigned lesson to the best of their ability . . ." There are two factors which would seem to this reviewer to bear out such insistence that the child complete his assigned lessons: (1) the assigned work may not be specifically geared to the ability level of that child or youth and, therefore, he is being asked to function at the frustration level; and/or (2) the child or youth may not have had a meaningful explanation of the work he is expected to do.

Garton also stated, "When a teacher is starting with a new class, her future success often depends upon beginning as a strict disciplinarian." Currently accepted practices in the area of mental retardation indicate that one would begin a new class with structure; however, strict authoritarianism, in the opinion and from the experience of the reviewer, is not recommended. Successful social and learning experiences from the initial introduction into a special class setting seem to provide an environment in which inner control may be developed. That inner control should contribute to Garton's expressed objectives of social competence, civic responsibility, economic efficiency, and self-realization.

The practical approach to methods presented in this book are valuable contributions to the area of teaching the mentally retarded. In the opinion of the reviewer, there is need for clarification and re-evaluation of basic philosophic approaches to the education of the mentally retarded as presented by Garton.

Human Factors in the Conquest of Space

Bernard E. Flaherty (Ed.)

Psychophysiological Aspects of Space Flight. New York: Columbia University Press, 1961. Pp. xii + 393. $10.00.

S. B. Sells and Charles A. Berry (Eds.)

Human Factors in Jet and Space Travel: A Medical-Psychological Analysis. New York: Ronald Press, 1961. Pp. xvi + 386. $12.00.

Reviewed by Ross A. McFarland

Dr. Flaherty, the editor of the first book, is a Lieutenant Colonel in the Medical Corps of the U. S. Air Force. He was formerly Head, Department of Neuropsychiatry, School of Aviation Medicine, USAF Aerospace Medical Center, Brooke Air Force Base, Texas. Presently he is Head, Department of Neuropsychiatry, USAF Hospital, Tachikawa Air Force Base, Japan.

Dr. Sells, co-author of the second book, obtained the PhD in psychology at Columbia University in 1936. He has directed extensive research programs in various government agencies. In his last assignment in the government, he spent 10 years as Chief of the Department of Medical Psychology at the USAF School of Aviation Medicine, Randolph Field, Texas. Since 1958 he has been Professor of Psychology at Texas Christian University. He has contributed many original papers to the fields of pilot selection and aviation psychology. CP *has recently received a copy of his new introductory text* (Essentials of Psychology, *New York: Ronald.) Dr. Berry, Sells' collaborator, is a graduate of the University of California, where he also received the MD degree in 1947. He entered the USAF in 1951, and while in the Advanced Training Program he obtained the Master of Public Health degree in Aviation Medicine under Dr. McFarland at Harvard in 1956. Currently he is Chief, Aerospace Medicine Division, Office of the Surgeon General, USAF, Washington, D. C.*

The reviewer, Ross A. McFarland, obtained the PhD in Psychology at Harvard, and is currently Professor of Environmental Health and Safety. He has trained over 100 physicians and engineers for careers in biotechnology and aerospace medicine. Many psychologists are familiar with his studies on human

factors in equipment design, aging, and the effects of high altitude on central nervous functions.

BERNARD E. FLAHERTY. Few would deny that it would be much less expensive and troublesome to send balloons, rockets and various kinds of spacecraft outside the earth's atmosphere without human occupants. A great deal of the essential information can be telemetered back to earth for a small fraction of the cost involved in orbiting human subjects in space, or landing them on various planets. No amount of telemetering of information or the automatic recording of data, however, can replace the performance and judgments of human observers. Irrespective of the relative advantages of men or machines, it is apparent to everyone that we are engaged in psychological warfare with the Soviets to excel in the exploration of *manned* space flight. Consequently it is the official policy of our government to send human occupants in various kinds of devices, at very high speeds, both within and outside the earth's atmosphere, with the specific objective of placing a man on the moon by 1970.

Regardless of who gets to various places first, this reviewer can assure his colleagues that they need not apologize for the contributions now being made toward these major aerospace efforts, both inside and outside the official government agencies, universities, and research institutes. To one who has followed the early history of aviation, and who has aided in selection of airmen and the development of pressurized cabins, it is apparent that the same basic principles are now being applied and greatly extended to the selection of astronauts and the design of space capsules. Psychologists have made, and are making, significant contributions to this exciting and rapidly developing field of exploration. Furthermore, it is possible to say that a great deal of important information is being obtained not only about the relationship of man to his terrestrial environment and the limits within which he must operate, but also about his behavior and his reactions to various kinds of stresses.

The book, ably edited by Dr. Flaherty, comprises one of the first documents which defines the psychophysiological aspects of space flight and helps to delineate the areas where future research should be directed. Although it is now possible to say that an astronaut can be kept alive in space for a limited period of time, much remains to be known about man's behavioral capabilities during more prolonged periods, let alone what will be required to land human beings on the moon or certain planets.

One could hardly expect to find a completely integrated volume when it deals with diverse subjects ranging from the development of space vehicles to the measurement of various aspects of animal and human behavior in flight. The editor, however, has grouped the papers to form a framework for the specialized knowledge of the 40 authors who have made contributions in widely different fields. Some of the authors will be recognized as participant-observers in actual pioneering explorations in space or space-equivalent conditions. Other names will be familiar as those of leaders in technical and engineering developments in the space effort. Finally, many psychologists, psychiatrists, and physiologists will recognize the names of those from their own disciplines who are well known for research in a wide variety of human response characteristics, quite apart from any orientation to space problems. In some chapters these specialists have related their own fields of inquiry to space efforts while others have left such translations to the reader.

THE FIRST section of the book presents the technical development of Project Mercury, and the personal experiences of those hardy souls who have ascended in balloons to over 100,000 feet altitude in the Man-high project, or jumped out of them at great heights in the Excelsior projects. Psychophysiological interpretations of human performance both in space flights and in simulation experiments are presented. The last paper in this section relates to the psychomotor performance and nystagmus of a Macaca monkey during a missile flight.

The second section of the book deals with critical problem areas anticipated in space flight. An account of the psychiatric factors in selecting astronauts is followed by a description of the way in which the now famous seven men were chosen, as well as an account of their training program. Several excellent chapters follow on the neurophysiology and neuroendocrinology of stress, including those on physiological cycling and rhythms. Suggestions are worked out in regard to the human engineering of space vehicles to control or adjust to various organic and psychic rhythms. The final chapter in this section deals with the important question of how to acquire physiological data during space flights and how to analyze and interpret such records.

The third section deals with problems of human reliability in face of the expected stresses. Attention is given to sensory overloading as well as sensory deprivation. The original experiments on sensory deprivation by Hebb, Lilly, and others are adequately covered, but more important, they are greatly extended and attempts are made to interpret the findings in terms of causality and psychic determination. Resistance to sensory deprivation, interpersonal relationships in small isolated groups, and speculations in regard to the emotional reactions of the first space travelers are analyzed in interesting ways. Astronaut proficiency and skill under adverse conditions and the quantitative measurement of cognitive processes receives thorough and able treatment.

The final section of the book is concerned with certain techniques such as prolonged hypothermia, the use of drugs and certain self-regulatory systems which might function in space flights when constant alertness and conscious direction might not be necessary. Hypnosis is explored as another such method. The above procedures for adapting to the rigors of space flight and thereby limiting the extent to which the earth's environment must be taken along are of interest but less convincing insofar as major advantages or contributions to the problems are concerned.

THE FIRST and most important conclusion which may be drawn from a careful reading of this book is that it

presents a great deal of technical information of direct concern to psychologists, physiologists, and especially psychiatrists. Furthermore, it is possible that bioastronautics might reveal new knowledge about human behavior, knowledge that cannot be obtained through more traditional approaches. Undoubtedly the present experimentation in regard to space flight is advancing our information in the fields of communication, meteorology, and applied areas such as micro-instrumentation and telemetering. Whether equally important contributions will be made to various social and biological sciences remains to be seen. This reviewer is convinced that such studies may prove to be of considerable significance.

Many of the problems which will be encountered in space flights of a prolonged nature still remain unknown and undefined. It is of interest, however, that the prediction made by one of the authors of this book in a chapter on the problem of weightlessness has been fairly accurate, at least insofar as the experience of the Russian Cosmonaut Titov are known. He became quite ill and experienced a considerable amount of motion sickness. Orientation in a gravitational free state involves not only the otolith and vestibular organs, but also visual and proprioceptive cues operating in a complex and interrlated fashion.

Two additional features of the book should be noted. In most cases, the lists of references for the individual chapters are quite extensive and complete. They should be very useful to those wishing to delve further into particular areas. Also, and quite unusual in a volume presenting the findings of a symposium, there is included a detailed index, both of topics and names.

S. B. Sells and Charles A. Berry. This book has been edited by a medical-psychological partnership in presenting the problems of jet and space travel. The editors have been aided by equally competent scientists in covering specialties other than their own. In contrast to the book reviewed above on the psychophysiological aspects of space flight, more attention is given to an analysis of what is currently taking place in the operation of high performance aircraft and space vehicles.

The field of psychology and related disciplines receives a generous amount of attention, especially in regard to selection, fatigue, skill, systems analysis, accidents and human engineering. The thirteen contributors have provided a wide variety of ideas and new material applicable to both flight crews and passengers in jet and rocket propelled vehicles at all altitudes. Furthermore, they have accomplished all of this in admirable fashion.

In the opening chapter, Dr. Ashton Graybiel, well known for his work on the otolith organs, outlines the physician's role in transporting passengers at high speeds and maintaining human performance at very high altitudes. He points out that the development of space flight is "a contest between man's ingenuity on the one hand and the hostility of the environment on the other." The next part of the book deals with the physical constants of the upper atmosphere, including a brief discussion of man's exposure to and protection from the physical forces involved. A separate chapter deals with the problems of radiobiology.

One section presents an excellent analysis of skilled performance in complex tasks and the deterioration of that skill due to such variables as fatigue and age. The usefulness of information theory as a tool in this investigation is briefly noted. The chapter on human operator performance, which follows this discussion, offers a method of searching for a good design of displays. The author used three actual instrumentation projects as examples to illustrate his arguments.

The selection and training of crews for jet and space flight are considered in several chapters of the book. The demands placed on airmen in high performance jet aircraft are shown in a chapter by Dr. Berry to be significantly greater than those faced by pilots of slower vehicles, in spite of gaps in the accurate assessment of the tasks to be performed. The importance of physical standards and physical evaluation of airmen is emphasized as well as the need for physiological training of pilots, especially where oxygen supply is jeopardized. His analysis of dysbarism, the symptoms resulting from evolved gases with extreme changes in barometric pressure, constitutes an original and informative part of the chapter.

The problems of group behavior of air crews in a flight vehicle are ably discussed by Dr. Sells. He has applied to aerospace flight, some of the findings of the psychology of small groups. The broad subject of superior-subordinate relationships is considered. A method of analysis of real situations via group goals, group staffing and group utilization is offered. Efficient utilization of personnel is discussed in some detail while considering man-machine systems.

Studies of aircraft accidents and public health measures for jet aircraft operations receive special attention. The chapter on accidents, by the late H. G. Moseley, will be of interest to psychologists because he was so thoroughly versed in the role of human factors in accident causation.

Two chapters deal with man's adjustment to the physical properties of the upper atmosphere and the interplanetary medium. An engineering analysis is presented covering celestial mechanics, propulsion systems and structures. A good, practical discussion is given of the physical and chemical requirements for the absorption of human waste products, and the generation of oxygen, water and nutrients. An estimate of the needs of each occupant in a closed ecological system is presented.

In the opinion of this reviewer one of the best chapters is by Dr. Hanks on human factors in jet aircraft. It contains a fairly extensive array of quantitative data covering a wide range of topics. Of particular interest is the hazard arising from rapid decompression of aircraft cabins and quantitative estimates of oxygen requirements following decompression. Material is presented on the hazards of ionizing radiation with high altitude jet operations, microwave radiation, and noise. The author discusses several theories of the neurophysiological structure of the central nervous system as it influences perception, motivation and response. This chapter symbolizes the large number of disciplines called upon to serve aerospace medicine.

There is a great deal of material in this book of interest to psychologists and those of related disciplines concerning current problems in jet and space travel. The subject matter is presented largely in descriptive rather than analytical terms, providing for simplicity and clarity of expression. There is some repetition in regard to certain topics, but all of the authors have conformed to a similarity in style, and the book is well written as a whole. There are only a few flights of fancy about outer space, and in general the editors have brought together a well-rounded volume. There are selected bibliographies at the end of each chapter, and the comprehensive subject index also will be found useful.

More Than Lip Service

John J. O'Neill and Herbert J. Oyer

Visual Communication for the Hard of Hearing: History, Research, and Methods. Englewood Cliffs, N. J.: Prentice-Hall, 1961. Pp. 163. $5.75.

Reviewed by JOSEPH ROSENSTEIN

Both John J. O'Neill and Herbert J. Oyer are directors of Speech and Hearing Clinics, O'Neill at the University of Illinois and Oyer at Michigan State University. Joseph Rosenstein, the reviewer, is Research Associate at New York's Lexington School for the Deaf and also instructor in Special Education at Teachers College, Columbia. Earlier, at the Central Institute for the Deaf in St. Louis, he was Research Associate, Clinical Audiologist and instructor of lip reading.

LEARNING to lipread is a challenging task; teaching *others* to teach lipreading can be a problem-laden struggle. The authors present for use in courses in aural rehabilitation a long-needed compendium of the history, research, approaches, methods, materials and tests of lipreading that will be gratefully welcomed by college instructors. For students who plan to teach lipreading, this book summarizes and replaces the traditional bibliographic lists containing many obscure or unobtainable references.

The authors also offer their text as a reference source for students of psychology, special education and otology. The chapters on techniques and materials are written for the student-trainee in hearing therapy or special education. The information concerning techniques is presented with no preferential treatment to a given school of thought, and materials are listed with the absence of a 'how-to' approach. The chapters on definition, tests and experimental study are of particular interest to and are geared toward students of psychology.

Lipreading is operationally defined as "the correct identification of thoughts transmitted via the visual components of auditory discourse," and is considered "a form of learned, linguistic behavior." There are those, however, who affirm that it cannot be taught, that it is a knack or an art. O'Neill and Oyer, nevertheless, present convincing examples of applications from learning theory and semantics to justify the construct "visual listening."

Visual Communication is a first in its area. As such, it should provoke psychologists to give thought to the many possibilities for research and expansion. Experimental psychologists may well appreciate the comprehensive survey of the research literature and, despite conflicting findings, find the study of the lipreading process a relatively untapped area of investigation, encompassing a wide range of variables that can be readily delineated. In the reviewer's opinion, linguists and psycholinguists will be stimulated to contribute more rigid criteria for stimuli used in tests of lipreading ability than are currently employed and reviewed in the text.

There is an enthusiastic treatment of the value and use of educational television as a teaching technique. This reviewer wonders, as may those psychologists concerned with programed-learning, why the authors did not take

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the opportunity to make mention of the filmed and kinescoped materials available for adoption as learning devices.

Ideally suited for the use of college students, the material in the book points up the close relationship maintained between this seemingly specialized area and the main body of psychology.

Portable Perspective

Robert C. Birney and Richard C. Teevan (Eds.)

Instinct: Selected Readings. Princeton, N.J.: D. Van Nostrand, 1961. Pp. x + 181. $1.45.

Robert C. Birney and Richard C. Teevan (Eds.)

Reinforcement: Selected Readings. Princeton, N.J.: D. Van Nostrand, 1961. Pp. viii + 230. $1.45.

Richard C. Teevan and Robert C. Birney (Eds.)

Color Vision: Selected Readings. Princeton, N.J.: D. Van Nostrand, 1961. Pp. viii + 214. $1.45.

Reviewed by SHERMAN J. TATZ

The editors of these three volumes, Birney and Teevan or Teevan and Birney, both went from undergraduate work with McClelland at Wesleyan University in Connecticut to graduate work with Atkinson and others at the University of Michigan in Michigan. Birney is now at Amherst College, Teevan at Bucknell University. Both continue a research interest in student behavior and the fear of failure. The reviewer, Sherman J. Tatz, is on the staff of Hunter College and got to be there through obtaining an MA at Temple and a PhD at Yale. At Yale he worked with Beach and Sheffield, doing a study under the latter on learning without awareness. He now works to influence the learning of students and to understand the mating of rats. Also he harbors a latent research curiosity about music.

FOR THE instructor interested in providing for his classes first-hand contact with the theoretical and research literature in psychology but thwarted by limited supplies and major omissions in library facilities, a variety of anthologies offer relief. Many of them attempt to represent all phases of psychology; a few deal with the content of a specific course, such as motivation, learning, or social psychology; others are even more specific in subject matter, but are limited to selections by a single outstanding contributor or from a single periodical. One group in the new (paperback) Insight Books series, initiated by Van Nostrand under the general editorship of David C. McClelland presents a different solution. This group consists of collections of readings compiled by Birney and Teevan, each collection illuminating a specific fundamental issue in psychology, without restrictions as to source or author.

At this writing only three books, reviewed here, have appeared in this group. Each, in 14 to 17 selections (some of them excerpted), aims to describe the interplay between theory and research in the treatment of a particular problem, starting with an early formulation of the important concepts and following this with selected experiments and theoretical revisions, bringing the reader to the current status of the problem. They were included in Murray's most recent report on Psychology's Paperbacks in the October, 1961 number of this journal (**6,** 341-347).

In *Instinct,* the stage is set with William James asserting the innate nature of reaction tendencies and Luther L. Bernard criticizing the labeling as instinctive of the alternate behaviors leading to a goal, and implicating learning as a major cause of such behaviors. There follows a series of selections in which the environmentalists, the ethologists and the psychogeneticists each have their turn. Increasingly louder voices are heard crying for investigation of the antecedents of behavior instead of merely classifying the behavior, with a final paper by Beach placing the problem in perspective.

Reinforcement opens with a statement by Thorndike of the law of effect, which is then translated into the drive-stimulus reduction hypothesis in excerpts from Hull and from Miller and Dollard. The remaining papers are concerned with some of the challenges and inquiries instigated by this hypothesis: the latent learning issue, Mowrer's dual process view of learning, Sheffield's consummatory response conception of reinforcement, the role of the exploratory drive in learning, and reinforcing effects of brain stimulation. Finally, Miller gives his evaluation of the theory's predictive power and discusses some of the questions it raises.

The first part of *Color Vision* contains the original formulations by Young, Helmholtz, Hering and Ladd-Franklin which attempt to explain the phenomena of color sensation. The remainder of the book consists of papers which expand one or another of these basic notions to accommodate the wealth of data from experimental and clinical studies, and Land's report of his startling demonstrations, fitting none of the traditions in vision. A closing selection from Osgood provides an authoritative summary of the problems, the theories, their successes and their failures.

THE EDITORS have placed the burden of synthesis on those who use these books, supplying the barest minimum of commentary on the papers, and provid-

ing no index for the use of those who wish to compare the statements of different contributors on the same point. The selections are on the whole well chosen; one notable exception is the excerpt in *Reinforcement* by Guthrie, which fails to present his explanation of the role played by reward in learning. Since excessively technical articles were avoided, many of the recent original research papers in vision with their complex stimulus-producing equipment were automatically excluded, and so generally the findings in *Color Vision* are summarized in theoretical or review articles. Consequently, one feature of the other two books, the close-hand picture of behavioral research methods, is missing in this book. The books are marred by occasional errors in identification of the selections; and in those readings excerpted from volumes in which reference citations are made by means other than footnotes, the editors failed to list the works cited, thus frustrating the very appetites they stimulate in the reader. One further small disappointment: the present reviewer disagrees with Murray's statement that these books are bound well. Like the average paperbound, they are put together to be read only once.

Despite these flaws, the books are a welcome addition to the resources of the teacher who wishes to demonstrate to his students that explanations do not spring full-blown from the psychologist's forehead. Graduate teaching will still demand libraries with intensive and up-to-date coverage of the literature. But these collections of readings effectively attain their goals of demonstrating the mutual influence of theory and research and illustrating it with high points in the development of some important concepts. Extension of the series in a similar vein should yield an arsenal from which the instructor can assemble batteries of supplementary material for many of the basic undergraduate courses.

Principles don't exist in general—you still haven't grasped that!—but there are instincts. Everything depends on them.

—TURGENEV: *Fathers and Sons*

Behavioristic Motivation

John F. Hall

Psychology of Motivation. Chicago, Ill.: Lippincott, 1961. Pp. vii + 382. $6.50.

Reviewed by EDWARD L. WIKE

John F. Hall is Professor of Psychology at The Pennsylvania State University. He took his PhD at Ohio State with Delos Wickens and, except for brief spells, has been at his present location and there concerned with the determinants of activity, since 1949. The reviewer, Edward L. Wike, with a PhD from the University of California at Los Angeles, is Associate Professor of Psychology at the University of Kansas where he reports himself to be a behaviorist surrounded by friendly Gestaltists, Lewinians and existentialists. Primarily, he studies reinforcement, both primary and secondary.

THE TEXTBOOK vacuum that has existed for several decades in the area of motivation is no longer, to use Harry Harlow's charming phrase, an "aching void." Instead, the instructor in motivation now finds himself in the uncomfortable position of being at the choice-point of a multiple-alley maze, making fractional anticipatory textbook responses.

The most recent entrant into this field is John Hall's *Psychology of Motivation,* a relatively short, tightly written summary of experimental studies. What are the author's aims? He states: "... a *primary objective* in writing has been to provide an *organization* which can incorporate much of the material traditionally found in this area" (p.v.). Secondly, "my object has been to present as representative a picture as possible of the current state of affairs and draw conclusions of a scope which can be borne by the weight of the evidence presented" (p. vi). In addition, Hall has provided some historical perspective for motivational concepts and commented upon methodological issues.

The organization is essentially Hullian. Undoubtedly this framework will make the book unpalatable to some. Gestalt psychologists will, for example, view Hall's treatment of perception *qua* instrumental response as a gross over-simplification, and the neo-nihilists (Koch: *Nebraska Symposium on Motivation,* 1956) will probably be disenchanted by the entire enterprise. It is pointless to present another critique of the much-maligned Hullian viewpoint—in the last analysis its eminent testability and the extent to which a satisfactory conceptual liberalization can occur will determine its fate.

THE EXPERIMENTAL data that Hall has incorporated represent a sharply delimited selection of studies from the broad spectrum of motivation. This is a book for experimental psychologists rather than for most clinicians or personality theorists. The studies reviewed are recent ones—roughly 65 per cent of the 930 citations are dated 1950 or later—and the issues considered are those currently appearing in our journals. The reviewer applauds Hall's restriction of subject matter, but regrets that he didn't restrict still more. Just as the heyday of sweeping psychological systems is past, so is the sweeping advanced textbook an anachronism. The additional restriction of the book's scope would have permitted a more detailed examination and collation of studies and, perhaps, the emergence of sharper conclusions. Some of the author's conclusions are not too illuminating. For example, under "ego-involvement" we learn: "although the findings in this area have been controversial, almost all of the studies we

have considered have indicated that some type of ego-involved variable can operate to influence performance" (p. 229).

When reading Hall's careful summaries of research, one is struck by the disarray that exists, both conceptually and empirically, in some areas of motivation. Part of the conceptual disorder would seem to stem from the capricious proliferation of concepts. Underwood *(Psychological Research)* has written thoughtfully on such matters as operational identification of concepts and priority of concepts which bear directly on this problem. The empirical disorder forces us back to basic issues such as the importance of measurement, replicability of findings, and standardization of tasks and instruments. It is unfortunate that a replicated experiment in psychology is an exact duplicate of a previous investigation *except that* certain crucial details are modified. These comments do not mean that Hall ignores methodological issues. On the contrary, he frequently departs from the job of organizing studies and searching for generalization to comment on problems of measurement, conceptual issues, and the like. In fact, some of these methodological discussions, e.g., the author's remarks on exploratory drive, curiosity, and activity, are among the most rewarding portions of the book.

With the reservation noted above, Hall has been successful in paying off the promissory notes issued in the preface. *Psychology of Motivation* is a sound book and should be a useful text, especially for students with some background in learning and learning theories. In terms of similarity of aims and content it is most like the recent books of Bindra and Judson Brown, while lacking some of the sophistication of Brown's book and the attempts by Bindra to develop a new theory. It is narrower in scope and more tightly organized than the revised P. T. Young book. It lacks the impassioned preoccupation with theory that characterizes Mowrer's *Learning Theory and Behavior* and, mercifully, contains 973 fewer and shorter footnotes. The instructor in motivation is, at last, at the choice-point—for textbooks, that is!

Pavlov and Psychotherapy

K. I. Platonov

The Word as a Physiological and Therapeutic Factor. Moscow: Foreign Languages Publishing House, 1959. Pp. 452.

Ralph B. Winn

Psychotherapy in the Soviet Union. New York: Philosophical Library, 1961. Pp. 207. $6.00

Reviewed by THEODORE MILLON

K. I. Platonov author of the first volume, has for fifty years been associated with the Kharkov Pedagogical Institute and the Central Clinical Psychoneurological Hospital. In 1910, upon the advice of Bekhterev, he completed a dissertation concerned in part with verbal suggestion in hypnosis. That research and subsequent ones led to a book, first published in 1930. The present book is a translation of a greatly expanded second edition of the 1930 work. Ralph B. Winn, the translator of the second book, is professor and chairman of the psychology department at Monmouth College, New Jersey. The reviewer, Theodore Millon, is an associate professor of psychology at Lehigh University. After completing his formal training in clinical and social psychology, he has learned a great deal about psychiatry by being in an improbable position requiring that he oversee the work of twenty psychiatrists; he is President of the Board of Trustees of the Allentown State Hospital. He is "coming along" on a book on theory and research methods in psychopathology. Although his parents are both Russian born he reports himself now so fully assimilated that he concerns himself among other things with such bourgeois matters as abstract art, surrealistic theater and atonal music.

TYPICALLY, a book reviewer feels called upon to make preliminary comments that sound properly complimentary, note a series of objectively stated facts and, naturally, leave sufficient opening for a critical attack to follow. However, when the volume at hand is by a Russian colleague, and is one which breaks that nation's long silence on psychotherapy, severe criticism may lend itself to the accusation of less than reputable motives hiding behind a facade of scientific high-mindedness. Platonov's own scrupulous approach suggests, however, that he would expect equally scrupulous appraisals of the merit of his work.

That the position of Soviet psychiatry is changing for the better is nowhere more evident than in this officially sponsored translation of Platonov's text subtitled "The Theory and Practice of Psychotherapy according to I. P. Pavlov." It reflects a trend inaugurated at the 1950 Joint Session of the Soviet Academies of Sciences and Medical Sciences which resolved "that psychology, psychiatry and a number of related fields be reconstructed on the basis of Pavlov's teachings." Somewhat curiously, this politically inspired conference, which saw many a first-rate investigator castigated for deviationism, gave Soviet psychiatrists a sanctioned doctrine to anchor their psychotherapies, once considered "idealistic." Platonov's book marks the emergence of the first systematic treatise of psychotherapy in line with this doctrinal view.

Taking off from Pavlov's theory of the "second signal system" which states that words can replace physical stimuli in conditioned behavior, Platonov presents a sustained and amply documented argument to the effect that

Personality and Decision Processes

STUDIES IN THE SOCIAL PSYCHOLOGY OF THINKING

Orville G. Brim, Jr., David C. Glass, David E. Lavin, and Norman Goodman

The development of new concepts and generalizations about the relations between decision making, personality, and social structure is the focus of these studies, which have been designed and carried out from the point of view of the sociologist. Through the use of personality tests and tests of decision-making processes, information was obtained from 200 adults. The results of these tests, in addition to providing new information on the relation between the personalities of the respondents and their decision processes, also indicate the differences between men and women, and between middle-class and lower-class groups, in decision making and personality. Stanford Studies in Sociology, II.

$8.00

Death, Property, and the Ancestors

A STUDY OF THE MORTUARY CUSTOMS OF THE LO DAGAA OF WEST AFRICA

Jack Goody

Based on two years of field work in northern Ghana and adjacent territories, this is one of the most extensive descriptions in anthropological literature of the rituals surrounding death in a particular society. It is, in addition, an important contribution to our theoretical knowledge of social structure and religion. The analysis of property and inheritance systems has not received systematic attention from most anthropologists. Yet, as the author demonstrates, the transmission of property from generation to generation is of critical significance in the understanding of social structure. Illustrated. $8.50

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verbal stimuli have distinct physiological consequences in the cerebral cortex, and by making use of verbally suggested emotions, the "tone" of the cortex can be altered to control the "state of the organism" and its "bonds with the external world." Since the "tone" of the cortex is weakened in neurotics, therapy, via persuasion and suggestion, consists of "inducing a calm attitude," or removing those factors which weakened the cortex. This, in a nutshell, covers the theory and the theme of the book. Over 150 pages are devoted to experiments dealing with cortical and subcortical concomitants of verbal suggestion. Stress is placed heavily on hypnosuggestive techniques in detailing the steps of a therapeutic program which begins with anamnestic interviews and ends with the goal of "restoring the normal activity of the cerebral cortex." Considerable space, perhaps one-fourth of the text, is allocated to case histories of neurotics treated by Platonov during his 45-year therapeutic career. Throughout these discussions, Platonov freely uses Pavlovian terminology and mechanisms to explain both clinical and experimental physiological phenomena.

PLATONOV'S rebuttal of the commonly held fallacy among non-Russian researchers that Pavlovians deal only with a hypothetical nervous system is argued impressively in a series of intriguing experiments designed to illustrate physiological consequences of verbal stimulation. These studies have an esthetic unity and internal merit of their own but, for this reviewer at least, are largely irrelevant to the author's considerations of psychotherapy. Platonov presumes the mere establishment of biological correlates to be definitive proof of the physiological basis not only of hypno-suggestive therapy but of the "concrete structure and mechanism of the neurosis." Several age-old errors of interpretation relating neurophysiological and behavioral data are overlooked here. That the cortex is involved both in neuroses and in the therapeutic process is no more than truism. Platonov assumes, however, that recordings of brain activity get at the essence of these processes. What he fails to note is the possibility that such records may be merely superficial signs that happen to be correlated with these processes but are not essential to them. Brain records may be as "peripheral" as changes in heart rate or skin resistance. Convenient though these data may be to the framework of Pavlov's theories of "higher nervous activity," Platonov too readily assigns excess importance to events simply because they are recorded at the cortical level.

Other unanswered questions may be raised. Can the varied manifestations of the complex processes of suggestion and neurosis be precisely and operationally defined with the aid of neurophysiological procedures? And more importantly, can we assume that psychological processes accompanied by known neurological events are fully understandable and modifiable in terms of neurophysiology? I fail to see that Platonov's speculations can do more than help us specify correlated phenomena, or that his ingenious research data, even in their future line of development, would bear any but a purely specious relationship to the therapeutic process he outlines.

Although psychiatric theory can well afford by now to take into consideration a growing body of neurophysiological data, there is no sound reason to continue neurologizing behaviorially derived concepts. Throughout the pages of Platonov's volume we are beset by such marked terminological discordances as to distress the most tolerant of readers. A case in point is the assigning of ambiguous attributes to "inhibition," a term derived from experimentation on conditioned reflexes, and applied by analogy to clinical pathology. Was it not Pavlov himself who said that what appears as inhibition at the behavioral level may turn out to be an active process in the brain? Yet here, posed before us as Pavlovian theory, are concepts derived from learning interchanged as if synonymous with correlated electrical phenomena on the one hand and linguistic behavior on the other. Clearer thinking would have accomplished more convincingly the rapprochement Platonov sought between physiology and psychotherapy.

Hypnosuggestion, though not the only psychotherapeutic method practiced, plays the central role in Platonov's treatment program. Although it is cloaked in Pavlovian theory, Western therapists will find difficulty in not viewing the technique as a mere refurbishing of an old vessel built by Braid and Charcot, captained by Breuer and Freud and then set adrift because of its tendency to founder on the rocks of resistance. Contrary to expectations and experience in this country, Platonov reports no failures, transitory cures, or the appearance of substitute symptoms. It may be a masochistic idiosyncrasy in this country but we find it uncomfortable either to report or receive results if there is not at least some sprinkling of negative data.

Do not be misled into thinking that the revival of hypnotic therapy is paralleled by a reawakened interest in psychoanalysis. Freud remains outside the pale, the champion of bourgeois "idealism" and its sexual preoccupations. If Platonov's critique of "Freudian teachings" were focused on the need for methodological precision in psychiatry, or if it opposed the psychodynamic obscurantism favored in many quarters on this continent, then we would hold no brief with his argument. If his critique reflects chauvinistic bias, however, or the intrusion of irrelevant ideological considerations, as is often implied, then we must register protest. Western psychologists no doubt have their share of ideological refractive errors but manage, I think, to intrude them minimally in their science. What will be a change of pace for American clinicians reading Platonov is the encountering of no statistics, not even little *t* tests tucked away in appendices. This break from a growing compulsion to clutter writings with the statistical ritual was a distinct pleasure to the reviewer, though one, he grants, of dubious methodological merit.

Perhaps we are unable to scrutinize the results of our Soviet counterparts without the jaundiced eye of Western traditions. Despite these lurking doubts, however, an ample objective basis for broad skepticism does exist. Western readers will find themselves repeatedly catching echoes of familiar debates, e.g., reductionism, hypothetical constructs vs. intervening variables, that have subsided

some time ago. Unfortunately, they will not find in Platonov the philosophical sophistication requisite for dealing convincingly with these matters.

WITH RESPECT to the second book, *Psychotherapy in the Soviet Union*, it is clear that in editing and translating papers presented at the 1956 All-Union Conference on Psychotherapy, Winn, professor of psychology at Monmouth College, undertook a difficult and responsible task. These same papers, published in the Russian volume *Voprosy Psikhoterapii* and reviewed in this journal by Field (*CP* Jan. 61, **6** pp. 12-13), offer a wide panorama of the newly emergent practice of Soviet psychotherapy. By bringing this material to the attention of Western psychiatrists and psychologists who cannot read Russian, Winn has done a useful if not a particularly well-executed service. Although there is need to recognize the difficulties of editing and translating specialized papers in so broad a territory, the present endeavor seems unnecessarily artless. Wooden and stilted phrases, ambiguous concepts and terminology may be the fault of the original authors, but can be redeemed often by the charitable hand of a skillful translator. Yet, here we have the essence of contemporary Russian psychotherapy ranging from general theoretical problems to therapy of the neuroses, psychoses, somatic ailments and alcoholism. Though no radical innovation was presented, the All-Union Conference was most encouraging, for it signified the opening of a new sphere of activity in which the Soviet intellect can develop and contribute. Perhaps it presages the evolution of constructive competition. Surely attempts to outdo each other in the medical sciences, including psychotherapy, is to everyone's advantage, for the loser would have as much to gain as the winner.

(Prepared in the framework of activities supported by a National Science Foundation grant 194G9).

"Not to be known always wounds."
—LAWRENCE DURRELL

A Darwinian Approach to Character

Robert F. Peck, with **Robert J. Havighurst, Ruth Cooper, Jesse Lilienthal** and **Douglas Moore**

The Psychology of Character Development. New York: John Wiley, 1960. Pp. xix + 267. $6.50.

Reviewed by JUSTIN ARONFREED

Robert Peck and Robert J. Havighurst the two senior authors, are identified in the review. Ruth Cooper and Douglas Moore were instructors in Human Development at the University of Chicago when this study was done, while Jesse Lilienthal was a research associate on the project. The reviewer, Justin Aronfreed, is Assistant Professor of Psychology at the University of Pennsylvania. He took his degree at the University of Michigan, held an instructorship at Yale and was senior research fellow at the Eastern Pennsylvania Psychiatric Institute before moving, in 1959, to his present post. He now thinks of himself as a developmental psychologist since both his curiosity and what he does about it concerns the application of learning and motivational concepts to the development of self reinforcing patterns of social behavior in children.

THE TERM character is generally used to refer to stable behavioral dispositions which come under the scrutiny of social norms and are not narrowly bound to specific situations. In recent work, there is a tendency to analyze a particular aspect of character into distinct components whose antecedent threads are then carefully sought in the individual's previously experienced patterns of social reinforcement. The book to be reviewed here belongs to an older psychometric and idiographic tradition that many psychologists still find viable and attractive. It reports an investigation focussed on 34 adolescents and carried out with the view that concepts were to emerge in the very process of making multiple observations over a period of years. It examines the genesis of character by interpreting numerous correlations within the highly structured intrapersonal dynamics associated with psychoanalytic theories of psychosexual development and egopsychology.

A broad look at the social individual is typical of projects born in the University of Chicago's Committee on Human Development. Dr. Peck, currently professor of educational psychology at the University of Texas, took his doctorate under the Committee's auspices in 1951. Dr. Havighurst, long professor of educational psychology at the University of Chicago, has previously explored adolescent character (Havinghurst and Taba, *Adolescent Character and Personality*, 1949), and is connected with landmarks in the social structure of child-rearing (Davis and Havighurst, *Amer. sociol. Rev.*, 1946). The present study is one of a series on the well-known Midwestern community of 'Prairie City' that gave us *Democracy in Jonesville* (Warner et al., 1949) and *Elmtown's Youth* (Hollingshead, 1949). It is more oriented toward the individual, of course, than those earlier works, and the reader familiar with the work of Ligon (*Dimensions of Character*, 1956) or of Roback (*Psychology of Character*, 1952) will feel at home. But the single most relevant ancestral reference is the *Character Education Inquiry* by Hartshorne and May (1928-1930). It is primarily *moral* character with which this book is concerned, and the authors clearly aimed at finding something more general than the particularistic behaviors uncovered by Hartshorne and May.

The core concepts are five developmental levels of moral character which

are, in their psychogenetic order: Amoral, Expedient, Conforming, Irrational-Conscientious, and Rational-Altruistic. These levels describe moral orientations which underlie overt behavior, and each is represented on a separate scale as a component of character. The individual's profile across the five scales provides the dominant character-type, indexed as "maturity of character." Then there are six relatively independent dimensions of personality, condensed from an initial set of thirty variables and labeled as Moral Stability, Ego Strength, Superego Strength, Spontaneity, Friendliness, and Hostility-Guilt Complex. Maturity of character was most significantly associated with the first three of these, a finding that is hardly surprising and raises the question of where character ends and personality begins. Both maturity of character and the same three personality vectors were positively related to Consistency and to Mutual Trust and Approval, two of four dimensions found in rating interaction within the subjects' families. There was also substantial relationship between maturity of character and peer sociometric ratings, though the authors present other data that lead them to conclude, quite justifiably, that parents are the overwhelmingly significant source of character-formation.

The immense amount of data gathered included extensive interviews, ratings of the subject' character and personality by teachers and peers, and many different projective tests and self-report inventories. The authors use factorial techniques abundantly, are adept at presenting internal consistencies within their data, and provide a readable continuity by relegating technical details to appendices. In view of the heavy use of rating scales, more attention could have been given to describing scaling assumptions and procedures. One feels, too, that the absence of controlled situational observations of behavior relevant to moral orientation may account for the appearance of moral consistency that Hartshorne and May did not see. But a more crucial methodological issue lies in the working procedures. A research team of ten people (including the primary investigators) spent a week for each subject in reviewing most of the information on that subject. *After a consensus was reached,* they separately rated the variables constituting the core dimensions of character and personality. Discrepancies were resolved at a subsequent meeting. The authors themselves note that "both sets of measures were made by the same research team, and therefore the relationships might only represent their own opinions." There is also a problem in knowing to what extent subtle interpersonal pressures within the staff generated the high degree of agreement among judges.

THE PSYCHOANALYTIC framework is most apparent in the theoretical integration, where attention is devoted to psychosexual stages, adaptive ego-functions, and systems of control and defense. The framework brings order and structure to a heterogeneous body of findings, but also brings problems associated with the conception of a psychogenetic unfolding of morality. This conception can properly be called Darwinian in the sense that it assumes a natural continuity in the direction of higher forms so long as the continuity is environmentally fostered. Thus, the Expedient level is said to "retain some of the primary narcissism of the oral stage, but represents a partial advance into the anal stage." The assumption that these moral dispositions have an organic succession is a rather large one, and there is little discussion of a sizable research literature suggesting that they are instead the consequences of discrete patterns of social reinforcement.

A problem concomitant with the Darwinian emphasis is that of placing the advancement in the direction of 'good' character within the setting of 'natural philosophy'. The criteria for rational altruism sound suspiciously appropriate to an Americanized social acceptability, perhaps even peculiarly to Prairie City. They suggest an other-directed flexibility that is carefully tuned to the values and feelings of others. This reviewer had the impression that adherence to abstract moral principles not supported by one's peer group was deemed irrationally conscientious. A case description of rational altruism portrayed a boy who knew his community's value-schemes, was popular, reliable, and 'well adjusted,' and seemed to lack strong commitment to anything in particular. The reviewer perceived him as an unreflective person without clear evidence of a self-defined identity. Perhaps Prairie City, with its absence of conflicting, multiple values, is too homogeneous a crucible in which to examine contemporary moral integrity. A key incident, used to illustrate a family atmosphere of 'talking things over' as a source of rational altruism, has the children initiating plans for a Sunday picnic. The father gives a folksy acquiescence and notes that "we're all goin' to have to work extra hard this week." This charming vignette may be good material for the *Saturday Evening Post,* but its bearing on moral character was obscure to the reviewer.

Another Darwinian limitation appears in trying to infer from the data what may be the specific developmental antecedents of the various moral orientations. The expedient character is said to have self-control and an organized system of values, but to lack internalized moral principles. Conformity and irrational conscientiousness are equated in maturity because both are presumably dependent on external sanctions. At the same time, the conforming person is said to place too much emphasis on the reactions of others, while the irrationally conscientious person shows a converse imbalance. Such distinctions and similarities are difficult to grasp without a more formal analysis of the nature and variant properties of internalized moral responses. They reveal that the idiographic approach is still to be admired for providing the full context of an area of human functioning, but that psychology also still needs the molecular, analytic tools for refined examination of limited phenomena.

I also believe that he is happy whose mode of procedure accords with the needs of the times, and similarly he is unfortunate whose mode of procedure is opposed to the times.

--MACHIAVELLI

Psycho-Social Problems of Man

John H. Schaar

Escape from Authority: The Perspectives of Erich Fromm. New York: Basic Books, 1961. Pp. xii + 349. $6.50.

Reviewed by RUTH L. MUNROE

The author, John H. Schaar, is professor of political science at the University of California at Berkeley. Ruth Munroe, the reviewer, has like the author had a hand in writing about Erich Fromm. She devotes considerable exposition to him in her well known 1955 book, Schools of Psychoanalytic Thought. *Not many had heard of Fromm when she did either her first book,* The Happy Family, *in 1938 or her second, in 1941,* Teaching the Individual. *She serves as visiting professor at the College of the City of New York and is engaged in the practice of psychotherapy where she still encounters Fromm as seen through the eyes of those to whom she gives therapeutic help.*

THIS is a brilliant, far-ranging book by a political scientist. Its subtitle "The Perspectives of Erich Fromm" is justified by its careful, sympathetic exposition of Fromm's views, prior to a critique so systematic and so devastating that the reader clutches at Professor Schaar's own forthright appreciation of the values of Fromm's approach to understand why he chose him as vehicle for a broad discussion of the psychosocial problems of man.

The misleading quality of the subtitle is illustrated by the fact that *CP* chose a clinical psychologist for this review rather than a sociologist. As a clinician, I will say at once that Fromm's positive contributions are poorly presented by Schaar. In 1941, Fromm's *Escape from Freedom* offered an invaluable stimulus toward integration of sociological and psychoanalytic data. Such concepts as sado-masochism and symbiotic relationships are barely mentioned in *Escape from Authority,* although they bulk large in Fromm's early work and retain their importance in the clinical field. Instead, Schaar's psychological critique is directed against the philosophic, moralistic, even evangelical generalities of Fromm's later books. One cannot blame a political scientist for neglect of the intricacies of Fromm's attitude toward psychoanalysis when Fromm's own books have significantly changed. Schaar's target is not Fromm the therapist and teacher of psychoanalysis, but Fromm the psychosocial theorist and major spokesman for a heterogeneous lot of people whom Woodworth loosely grouped together as psychologists of the "self." Neither Schaar nor Fromm adequately acknowledge the immediate psychoanalytic and the general psychological background of Fromm's thinking.

Schaar's critique is based essentially on logic. Although his style is academic at worst and at best as vivid as Fromm's, I venture to quote one of his occasional lapses into low humor to highlight his main point. "What should one do when one catches a writer with his consistency down?" Many times in each chapter, the author builds up Fromm's perspectives in two directions, with sympathy for each, only to remark that one cannot logically adhere to both. He holds that Fromm's major error is a dodging of the vital issues.

Although Fromm's immediate forbears and contemporaries in the clinical field receive scant attention, Schaar places his subject in a broad context. He contributes excellent resumés, sometimes several pages in length, of the views of men who have either directly influenced Fromm's thinking or who represent parallel ideas. Marx and Hegel illustrate the former, but there

JOHN H. SCHAAR

is a noteworthy omission of Abraham, Horney, Sullivan and even Freud. (There is no systematic discussion of Freud, but frequent mention, selectively approving.) Parallel ideas range from Hobbes to Existentialism, witth a competent critique of the beatniks and of social psychologists in their more narrowly "scientific" techniques. Schaar also casts a wide net throughout history, suggesting that Fromm fits best with the rationalism of the eighteenth century, when Rousseau could propose a social contract implying faith in the native goodness of man.

But Fromm, says Professor Schaar, unlike Hobbes or Marx, does not face the logical consequences of his analysis of man's dependence on his society. Optimistic yea-saying to man's creative potential does not bridge the practical gap between the psychological sickness caused by a sick society and the psychological health of a sane society.

FROMM makes a ringing call not only to reason, but to our fine new scientific approach. Although Schaar is himself critical of survey techniques, he points out that to select as scientific proof a couple of supportive surveys out of the

enormous mass of such material now available is just plain "unscientific" by anybody's standards. Fromm is also seen as calling upon psychoanalysis as proof, while repudiating Freud, Sullivan and apparently all schools except his own.

Professor Schaar's complaint goes beyond the inconsistency of basing a new approach on science and then of using science badly. He points out that Fromm finally dismisses science in favor of understanding via love. And what is this love? According to Schaar's analysis of Fromm, it is not ordinary human love which, however benign toward the outside world in its general euphoria, is essentially indifferent to the world, and is exclusively devoted to a particular object. Schaar calls it brotherly love in the Christian tradition, but without the fellowship of Christ. It grows out of the attitudes of Fromm's ideal—the productive man.

A few years ago, as a teacher of the Rorschach method to starry-eyed youngsters ready to clap almost anybody into psychoanalysis, I went to the trouble of mimeographing a sober account of what a "normal" person would be like if he fulfilled optimally all of our sound test criteria. He came out admirable, but an unmitigated bore, unlikely to be so silly as to risk himself in any fresh productive enterprise. Shaar's description of Fromm's "productive man" is almost identical. The purpose of the exercise described above was to move young clinicians to open their eyes to varieties of personality. Schaar wants us all to open our eyes very wide for a whole world.

Schaar has an answer concerning man and society. In his last chapter he suggests that there is no final solution to the problem of society versus man, but an underlying theme throughout the book has been that Fromm's ideal of "living for living" is not enough. Neither is statism nor theocracy. Schaar's simile is the city wall which thinly divides man from nature outside, as the city's laws divide him from the primitive nature within himself. This political scientist concludes that polity is a necessary compromise between man and society, and that constitutional government is our most practicable means of dealing with nature, outside or within the city wall. Schaar uses the wall in its strength and frangibility as a symbol of political science as a border discipline between psychology and sociology. He has the courage to say that the crazy, often misapplied notion of "the law" is what stands between an overweaning state and natural man, that political science can never achieve Utopia, but that it can recognize that man's needs for freedom *and* authority are basic in an ever-changing mixture. He can escape from neither.

Schaar describes Fromm as a man in a hurry. This reviewer has the nostalgic feeling that the Fromm of 1940 could have written this critique himself if he had felt less urgency, less sense of mission. Schaar's critique of Fromm's sane society is strangely reminiscent of Fromm's own earlier analysis of the processes of social change.

Quo Vadis Psychiatry?

Jules H. Masserman (Ed.)

Current Psychiatric Therapies: Vol. I. New York: Grune & Stratton, 1961. Pp. x + 246. $7.50.

Reviewed by IJA N. KORNER

Jules Masserman, as both author and editor, is familiar to most of CP's *readers. During the past two years his products have been reviewed four times in the journal.* (CP, *April 1960,* **5,** *134)* (CP, *July 1960,* **5,** *223)* (CP, *July 1961,* **6,** *242)* (CP, *May 1961,* **6,** *158). Still other reviews are to come. He continues his psychiatric work at Northwestern University School of Medicine and at the Illinois State Psychiatric Institute. The reviewer, Ija N. Korner, is Chief Psychologist and Associate Professor of Psychiatry (psychology) at the University of Utah College of Medicine. He ended up in clinical psychology, and in Utah, after training with Piaget and Claparède in Switzerland and after two years at Columbia University as research assistant to Barbara Burks who was at the time studying genetics. He likes to think of himself not as a clinical psychologist but as a psychologist with clinical interests in both research and practice.*

WHEN an old psychiatric hand with excellent scientific and clinical credentials edits the first in a series of 'annual publications' called *Current Psychiatric Therapies,* it is of interest to the social and biological scientists. Psychology, which is both biological and social and which cooperates with psychiatry on many levels, will be especially interested to read what psychiatry considers its own state of affairs in the realm of treatment.

Of the twenty-seven articles, eight deal directly with the management and treatment of the mentally ill, while seventeen are devoted to psychotherapeutic enterprises directed primarily toward a population which is unhealthy but not mentally ill. Two articles can be described as surveys, one of child psychiatry, the other of group therapy. It seems that only a small part of psychiatric thought and preoccupation is concerned with the mentally ill *per se,* while a much larger and important segment of the field is interested in extending its activity into the direction of preventive care of the distraught and psychologically handicapped.

The treatment of the mentally ill appears to proceed along firmly established lines. On the extreme right there is massive convulsive therapy, in the center chemotherapy (about which the pharmacologists are the most skeptical, the biologically oriented psychiatrists the least), and on the left or liberal wing there is Jones's "Therapeutic Community." Somehow these three points of view have learned to live together in the minds and activities of eclectic psychiatrists. The increased awareness that the patient comes from and goes back to a social constellation, which must be modified and prepared for his return, is progessive and gratifying. Attention is also focussed on day-care and after-care centers. Equally significant is the trend against institutionalizing patients unless deemed absolutely necessary. It is as if psychiatry had perhaps wisely drawn back tem-

porarily from an all-out attack on cause and cure of mental illness to pursue the goal of providing more and longer lasting symptomatic and social improvements in patients. Some authors note that there may be little value in the hallowed medical tradition of chasing down the cause and treatment of a single disease.

Most of the articles deal with extending psychotherapeutic efforts to more specific areas such as adolescent treatment, suicide first-aid, children with conversion problems, and others. In all instances but one, the underlying philosophy of treatment is based more or less on psychoanalytic theory, or one of its derivatives, with varying admixtures of "this and that." The exception is provided by Cameron's article "Repetition of Verbal Signals" which represents a new, bold and refreshing approach to therapy.

As for theoretical models, or radical innovations and modifications of techniques, psychiatric psychotherapy appears at a standstill. Many authors complain that psychotherapy is, as yet, a clumsy tool, interminable, unreliable in results, inconclusive in its effectiveness. An air of resignation pervades psychiatric discussion of psychotherapy. They seem discouraged and frustrated by their inability to achieve decisive advances.

Attempts are under way to clear the conceptual psychotherapeutic jungle of some of its twilight and underbrush. Psychiatrists seem to feel that some of their either-or positions are not pertinent; group-therapy can work in combination with individual therapy; shock therapy can be used together with psychotherapy; husband and wife can be treated by the same therapist. It is as if a slow integration is taking place between psychiatric orthodoxies, putting together what is valuable, dropping what cannot stand the test of reason.

There are gaps in the volume. Research endeavors in psychotherapy are barely mentioned, though they do exist. Russia and Germany follow, in the main, therapeutic paths which are different from ours—no mention. Social psychiatry—nothing. The quality is uneven. The scholarly alternates with the pedestrian; the excellent is followed by the mediocre. Dr. Masserman is aware of omissions and in his final article tries to "wrap up" some of the many loose ends. With his strong philosophical bent he adds to rather than detracts from the confusion.

Occasionally, one stumbles over a pearl. On Page 34 one author writes, "the third [theme of treatment]—is the complete confidence of the therapist in his expectation that the symptom will shortly disappear." This is meta-psychotherapy. It starts with autosuggestive maneuvers of the therapist.

Anyone having contact with psyhciatric literature will probably be disappointed in this book and will wish for an improved and more inclusive Volume Two.

The Immediate and the Whole

Rollo May (Ed.)

Existential Psychology. New York: Random House, 1961. Pp. 126. $.95.

Reviewed by Fred McKinney

Rollo May, editor of and contributor to this volume, is a clinical psychologist who engages in the private practice of the profession while serving as a fellow and a member of the faculty of the William Alanson White Institute in New York. His publications include The Meaning of Anxiety, Man's Search for Himself, Existence (A New Dimension in Psychology and Psychiatry), *and* Symbols in Religion and Literature. *Fred McKinney is not only a productive author and renowned teacher but has been a frequent and willing reviewer for* CP. *He has recently been immersed in the taping of thirty-two lectures on general psychology but came up for air, and perhaps respite, to prepare this review.*

Man ". . . falls in love, mates, nurtures his offspring; he suffers basic anxieties (fear of death, feelings of guilt, and a horror of meaninglessness); he seeks always the 'why' of existence; he dies alone. Since psychology as a science has not oriented itself to these central themes, it has not yet fully dealt with man's existence." These sentences written elsewhere by one of the contributors to this volume, (Allport, G. A. *Pattern and Growth in Personality,* 1961), succinctly express the underlying motivation for the unselfconscious emphasis in psychology, which Rogers here calls the "existential trend." This stream has many contemporary tributaries, as Maslow points out. They are found in the writings that emphasize self, growth, and the organismic viewpoint. They are seen in Jungian and certain neo-Freudian psychologies, in psychoanalytic ego-psychologies, and in Gestalt therapeutic contributions.

In this volume, an edited version of a symposium presented at the APA meeting, we have several outstanding psychologists affirming the importance of certain concepts for a proper image of man-concepts such as personal identity, responsibility, meaningfulness of life to the individual, and futurity. The writers do not purport to present a definitive account of existential psychology, which is regarded by them not as a movement in the profession nor a technique but rather as an attitude about our presuppositions and views of the individual.

The emergence of existential tendencies in American psychology is not out of character with its origins, a fact recognized by May. James emphasized immediacy of experience and the union

of thought and action. Moreover, since psychology in the United States has followed in the main the functionalist tradition with a pragmatic philosophical undergirding, the interest in the individual and his complex adjustments to his environment is a natural development. This interest explains in part the great proliferation in the areas of applied psychology.

The relatively recent emphasis on a phenomenological posture is less congruent with most of functionalism but not with James's or Ladd's early positions. Allport is more representative of American psychologists when he cautiously says that in *some* cases the individual's view of himself offers a promising approach, and that the patient's own distorted aspect of the world may constitute his ultimate problem.

Some of the papers in this symposium discuss in general terms the emergence of existential psychology and its expressions in American psychology. Others indicate the empirical implications of the viewpoint. With episodes from a case, May illustrates six principles valuable to him as a psychotherapist. Rogers quotes from a study under his direction in which the degree of self understanding in delinquents was the best predictor of later behavior. Feifel's studies on attitudes toward death, presenting data collected on groups of persons differing in religious commitment, age, and mental health, also emphasize the implications for research of the existential view of man.

The appendix, consisting of a classified bibliography of 177 titles preceded by several pages of introductory remarks prepared by Joseph Lyons, shows the extensive interest and development of this theoretical approach.

I find this book refreshing. As one who respects what the objective trend in American psychology has contributed in the way of emphasis on concrete operationally-defined concepts and reliable experimental procedures, but who also obtains deep and meaningful satisfaction from the scientifically responsible writings of such psychologists as those contributing these essays, I appreciate seeing the variety of ways one can be concerned with the whole spectrum of human behavior. The reader who expects to get a systematic treatment of the subject with clear-cut definitions and definite answers will be disappointed. He will, however, get a basis and possibly an appetite for further reading. Some may miss, as I do, an index which would help one to find points of similarity and difference between the writers.

This is a book which undergraduates and professional psychologists of varying persuasions can pick up, read readily, and use to satisfy curiosity about the concept "existentialism" as it is related to psychology. These essays may help remind the psychologist of some ultimate goals of his endeavors and his relationship to other academic disciplines concerned with understanding man.

Low Down on High Speed Reading

Henry P. Smith and **Emerald V. Dechant**

Psychology in Teaching Reading. Englewood Cliffs, N. J.: Prentice-Hall, 1961. Pp. x + 470. $7.50.

Reviewed by Frederick B. Davis

Henry P. Smith and Emerald V. Dechant (pronounced Deckant) are both professors of education and both in Kansas, Smith at the University of Kansas and Dechant at Fort Hays State College. The reviewer, Frederick B. Davis, is also a professor of education but not in Kansas. He professes at Hunter College in New York. Twenty-one years ago his EdD at Harvard was granted on the basis of a dissertation on reading comprehension and he has been involved with reading ever since. He is author of forms Q through Z of the Cooperative Reading Comprehension Tests *and of the* Davis Reading Tests. *Recently he designed and started a six year study of the teaching of English in the schools of the Philippine Islands.*

Psychology in Teaching Reading was written to provide teachers and teachers in training with an understanding of the psychological bases of the reading process and of the ways in which this process may be developed most efficiently. Basically, the approach of the authors was to select experimental studies that provide data useful in understanding the reading process, to interpret these data, and to apply them to handling practical problems in the classroom. The major areas from which the experimental data were drawn are as follows:

Perception
Learning
Physiological bases of reading
Skills involved in reading
Effective study techniques
Readability and legibility
Motivation and personality factors
Reading and content areas
Diagnosis and remediation in reading.

Smith and Dechant's presentation of the data and the meaning of data is simple and straightforward. The book should be both interesting and valuable to teachers and prospective teachers of reading. It is the conviction of the present reviewer that a course in methods of teaching reading for undergraduates should follow basic courses in educational psychology and in educational measurement and should cover three main areas: first, basic information about the psychology of reading; second, demonstration of specific techniques for carrying the psychological principles into practice; third, supervised practice in teaching children to read. Smith and Dechant's book would serve admirably as a text in such a course.

The balanced and sensible way in which the authors handle topics is well illustrated by the chapter on skills of comprehension and rate. Teachers and laymen often find themselves confused by such statements as that rate of reading (in terms of words covered per minute) is highly correlated with comprehension (in terms of extent of understanding) of the material read, or, that it is possible for many people to learn to read without loss of comprehension at a rate of many hundreds or even thousands of words per minute. As Smith and Dechant point out, studies generally indicate that the degree of relationship between rate and comprehension varies with the nature of the reading task, the techniques of measurement used, the difficulty of the material and the purpose of the reader. Blommers and Lindquist (1944) in a classic study showed that, among readers in grades 11 and 12 who maintained a high level of comprehension, the correlation of rate and comprehension scores was .30. This low positive correlation appears to have resulted from the relationship between the assimilative ability of readers and their verbal aptitude. In fact, Flanagan showed (1939) that with the purpose of the reader, the nature of the task, and the difficulty of the material held constant, comprehension scores of a group of twelfth-grade pupils decreased consistently as rate of reading was increased. Thus, for any given person, as his purpose and motivation and the nature and difficulty of the material are held constant, there is a *negative* relationship between rate of reading and comprehension. These data suggest that efforts to increase an individual's rate of reading without corresponding loss of comprehension should be directed to increasing his motivation to read as rapidly as his verbal aptitude will permit him to assimilate the material and to train him to adjust his rate to the nature of the material and his purpose in reading it. As Smith and Dechant put it, "The good reader does not, however, read all materials at a fixed rate. He is a flexible reader," (p. 222).

It is the reviewer's opinion that practice exercises in reading different kinds of material for diverse purposes should constitute the major emphasis in so-called 'reading-improvement' courses. Data obtained by many experimenters, such as Laycock (1955), show that if the difficulty of the material is held constant, rate of reading among individuals in the upper half of the distribution of verbal aptitude can be at least doubled merely by requesting the individuals to read as rapidly as possible without sacrificing reasonably satisfactory comprehension. It seems likely, therefore, that mechanical devices or eye-movement exercises designed to increase rate of reading are superfluous. Indeed, so eminent an authority as Dorothy Vernon is quoted by Smith and Dechant as having written, "Devices which compel the reader's eyes to move at an even speed whatever the nature of the material read, or his intention in reading it, might in the long run destroy the flexibility necessary for intelligent reading," (page 230).

The reviewer has long since learned to discount claims that reading-improvement courses produce spectacular gains in rate of reading without loss of extent or depth of comprehension. Careful evaluation of data on which such claims are based ordinarily reveals serious flaws in the design of the experiment, in the measuring instruments employed, or in the interpretation of scores derived from them. Smith and Dechant discuss some of the problems of measuring gains in reading skills in chapter 15 but a full treatment of this vital topic is outside the scope of their book. Anyone seriously interested in evaluating the results of training in reading should consider the techniques summarized by Davis in the *Tenth Yearbook of the National Reading Conference* (1961).

In summary, it may be said that Smith and Dechant have performed a valuable service in summarizing in *Psychology in Teaching Reading* the most important research findings about this important human activity.

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Everybody A Counselor?

Walter F. Johnson, Buford Stefflre, and Roy A. Edelfelt

Pupil Personnel and Guidance Services. New York: McGraw-Hill Book Company, Inc., 1961. Pp. xii + 407. $6.50.

Reviewed by Claude W. Grant

All three authors profess at Michigan State University, where Walter Johnson heads the University's Guidance and Personnel Services, Buford Stefflre works with him, and Roy Edelfelt teaches in the area of curriculum. Johnson, the principal author, a Minnesota PhD, is a past president of the American Personnel and Guidance Association. The reviewer, Claude Grant, is professor of Education in the Department of Guidance and Personnel Administration of the School of Education of New York University. He, too, is a Minnesota product, with experience in teaching and in counseling at Syracuse University and the University of Utah before moving in 1957, to NYU.

Pupil Personnel and Guidance Services is an ably written book, one that in general should be well received in the introductory course in Guidance and Pupil Personnel Services. This statement is made even though this reviewer was disappointed that the authors were not able to free themselves

from the concept of the five guidance services. (Information, Individual Inventory, Counseling, Placement and Evaluation.) This concept continues to haunt and limit the field of pupil personnel services as well as the text of this book. One wishes that the term Guidance Services could have been omitted from the title. This would have freed the authors to conceptualize helping services in terms of educational processes rather than in terms of guidance services.

While the book is solidly written, this reviewer is inclined to think that the authors should have started with chapter 6. A book should, of course, have an introductory chapter, but there seems, little rationale in a book of this type for devoting four of the first five chapters to a review of the basic content of undergraduate teacher education. If it seemed necessary to fill in the space between the introduction and chapter 6, a summary of pertinent research on individual differences might have been a better filler.

The authors view the pupil personnel function as being "made up of those activities and services which are individualized attempts to aid the pupil in the maximum development of his potentials in accordance with his unique background and equipment." From this view, all school personnel who individualize attention to pupils (is there any other way to view a pupil) have a pupil personnel "role."

The teacher is credited with contributing to pupil personnel work through many activities such as "gathering and wisely using information about children, establishing a classroom climate conducive to growth and insight, providing group and individual experiences aimed at helping the child understand himself and others, and sharing information with parents so that the home and school can contribute more effectively to the education of the child." It is quite apparent that these listed activities are precisely those that teachers need to perform with skill if they are to be good teachers. The authors present the view (this is traditional with the five services concept) that when the teacher becomes concerned with pupils as individual learners, she is now a counselor, or a guidance worker contributing to the pupil personnel program. Shame for making enlightened teaching into pupil personnel work! What is there left in teaching?

On the other hand, the authors state that "The teacher has primary responsibility for instruction and other services exist to support and enhance instruction." Here again there seems to be conformity to tradition rather than a fresh conceptualization of the educational process. There is no doubt, of course, that pupil personnel services facilitate classroom instruction, but this seems too limited a view. This reviewer believes that pupil personnel workers must build their positions and futures, at least in the major part, on the base that they provide important learning experiences different from and in addition to the learning experiences provided by classroom teachers (even "pupil personnel-classroom teachers").

While this reviewer disagrees with some of the "role" concepts of the authors, he can point to no better source for a careful description of the jobs, training, and professional affiliations of various school personnel and their "involvement in the pupil personnel services program." It is interesting to note that the suggested characteristics (educational preparation, job responsibilities, etc.,) of the school counselor, school psychologist, and school social worker are so similar that it is difficult to distinguish one from the other—at least on paper. The authors might have taken up the banner for one general personnel worker, adequately prepared of course, to carry out the activities described as central to these three positions. Such a stand might not have been in keeping with tradition, but it may be time someone took it.

The core of this book, Parts III and IV, gives careful consideration to school positions, current procedures and practices, and current tools useful to school personnel in furthering the educational process. Part V, containing one chapter, attempts to look to the future, but it does not strike this reviewer as a penetrating or distant view. No attempt is made to develop a theory of pupil personnel work or to construct a model that might give direction to pupil personnel workers.

The preface of the book leads the reader to expect something a little more avant-garde than actually is the case. The book, however, does an excellent job of introducing teachers and those interested in preparing for pupil personnel positions to the general scope of pupil personnel services, viewed from a guidance services point of view.

Genes and Sounds

L. F. Brosnahan

The Sounds of Language: An Inquiry into the Role of Genetic Factors in the Development of Sound Systems. Cambridge, England: W. Heffer and Sons, 1961. Pp. vi + 250. 25s.

Reviewed by Eric H. Lenneberg

The author, L. F. Brosnahan, is a New Zealander who received his DD. Litt. at Leyden in the Netherlands and who is now a lecturer in English at the University of Ibadan, Nigeria. Eric H. Lenneberg, the reviewer, received his PhD at Harvard and now, across the Charles River, is Research Associate in Psychology in the Harvard Medical School and in the Children's Hospital Medical Center. His research centers on the physiology and the development of speech and he maintains a continuing interest in the general problem of the interaction of biological and environmental factors in the control of behavior. He travels back across the river to teach at Harvard a graduate course in the psychology of language.

In this scholarly work the author investigates an hypothesis originally proposed by C. D. Darlington[1] in which the historical changes in the sounds of languages are explained in terms of modern genetic theory.

Although full proof is not feasible, Brosnahan comes to the conclusion that there is strong evidence in favor of this thesis. The main fact to be explained by the hypothesis is that sound changes follow a characteristic geographic distribution, resembling a wave that slowly moves across the land. A given phoneme which may be comparatively rare with respect to the population of languages of the world (such as African clicks) invades the territories of speech communities of historically unrelated languages. The factual situation is beautifully illustrated in the book by the history of the /th/ (dental fricative) in European languages. Today this sound is confined to peripheral countries of Eastern Europe (the Scandinavian countries, England, Iberic countries and some Mediterranean countries, comprising three totally unrelated language families, namely Finno-Ugric, Indo-European, and Basque); but within historic times it covered most of Central Europe. The claim is made that the /th/ is being crowded out of Europe by some influence that is acting in an East-to-West and center-to-periphery direction.

Brosnahan reviews all the existing explanations for this phenomenon and comes to the conclusion that any theory is doomed to failure unless it looks for the ultimate cause of the sound changes within the changing nature of the speakers themselves. Darlington's hypothesis satisfies this condition. It holds that "phonetic change is a process by which a community adapts the sound complement of its language to preferences which are determined in part by (that community's) genetic composition" (28). The preferences for specific articulations and combinations of articulations are dependent upon the "duration of the period of continuity in time between the community as a biological unit and its language" (27). Different preferences arise because of mean functional and structural differences in the vocal apparatus resulting in different average effort required for different articulations from community to community (212).

These notions become meaningful in the light of genetic theory which Brosnahan takes great pains to expound. The geneticist's concept of *clines* is of particular importance in his discussions. As a result of socio-political intercourse there is a diffusion of genes from mating group to mating group. In contiguous stable mating groups, genes will diffuse across the geographical borders containing these groups but the density of diffusion will diminish with increasing distance from the boundary. Clines are gradients of the statistical averages of the appearance of genetically determined characters in sections of the population of a species over a large area.

THIS REVIEWER finds the assumption of minimalization of effort hard to accept, not so much on empirical but on methodological grounds. Other objections that suggest themselves are admirably dealt with by Brosnahan. Why could not the phenomenon be due to cultural diffusion inasmuch as the flow of cultural items is clearly faster and freer than that of genes? Brosnahan's answer is that historically there are many instances of spontaneous appearance of sounds in the absence of a source language or contact languages. Can structural divergences in the vocal apparatus be demonstrated from speech community to speech community? Anthropometric data in support of this proposition is cited but the author agrees that it is not yet fully sufficient for a "proof." Direct prediction of phonological peculiarities in a given language cannot yet be made by description of the morphological characteristics of a community's vocal equipment. If the thesis were correct, would not the American born descendents of Russians encounter difficulties in the pronunciation of English, even if this were their mother tongue? Brosnahan points out correctly that merely a very small (and hard to detect) increase in the statistical incidence of articulatory difficulties encountered by this group of children would constitute sufficient evidence for the possibility of Darlington's thesis. However, actual data are not available to date.

The book raises an interesting problem. If Darlington had reported on the discovery of clines in the nesting habits of a given species of birds, the data would fully convince us that we are dealing with a genetic phenomenon. But he reported on clines in sounds of language which predisposes us to argue against hereditary factors. If we could be convinced that behavior in general and speech in particular is a totally social phenomenon, we could find satisfaction in Brosnahan's inability to *prove* the correctness of Darlington's thesis. But as psychologists we are inclined to recognize certain biological bases of behavior and we are heavily committed to reject the notion that verbal behavior is different from all other behavior. Brosnahan has made a courageous effort to investigate an unpopular theory. He has found it to be acceptable though not incontestable. It is our duty to give it serious consideration and to be willing to modify our conceptions of the nature of language if the still remarkable gaps in our understanding of this behavior can eventually be closed. Darlington and Brosnahan may have pointed the way to a significant and new approach to a fascinating problem.

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When two observers perceive what is regarded as one occurrence, there are certain similarities, and also certain differences, between their perception. The differences are obscured by the requirements of daily life, because from a business point of view they are as a rule unimportant. But both psychology and physics, from their different angles, are compelled to emphasize the respects in which one man's perception of a given occurrence differs from another man's. Some of these differences are due to differences in the brains or minds of the observers, some to differences in their sense-organs, some to differences of physical situation: these three kinds may be called respectively psychological, physiological, and physical.

—BERTRAND RUSSELL

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Growth Concept for Teachers And Others

J. M. Tanner

Education and Physical Growth. London: University of London Press, 1961. Pp. 144. 12/6.

Reviewed by DALE B. HARRIS

J. M. Tanner, MD, DSc, is Reader in Growth and Development of Children in the Institute of Child Health at the University of London and Honorary Consultant in Growth and Development for London's Hospital for Sick Children. He is author of the book Growth at Adolescence, *now in its second edition, and co-editor, with Barbel Inhelder, of Volumes I-IV of* Discussions on Child Development, *produced by the World Health Organization. The reviewer, Dale B. Harris, is professor of psychology at the Pennsylvania State University. He was trained at the University of Minnesota and stayed there for seventeen years, teaching child psychology and child development and serving, for five years, as Director of the famed Institute for Child Development. He carried east with him an abiding interest in child development, child guidance and parent education.*

FUNCTION can be manifest only through a structure, and the development of that structure is a necessary condition for function. Students of human physical growth have long affirmed such a basic position for their work *vis a vis* the more behavioral disciplines; some have also believed that in the development of form and structure one may discern an analog for the shaping of performance. Tanner's little volume, which packs much material into relatively few pages, seems to take such positions. The author, a member of the Institute of Child Health at the University of London, has selected from the literature on human growth the material he considers significant for teachers. His contribution is chiefly in the assembly and review of this selected material, and the presentation of certain general concepts and principles in clear, straight-forward language. His interpretations suggest rather than delineate; in some spots he seems to imply rather more than the facts presently warrant.

One example may be presented at some length to illustrate the book's tendency to hint at relationships between structures and behavior which, though possible and perhaps plausible, have certainly not been fully substantiated. Tanner assembles available evidence that tempo of growth (rate of movement through the successive phases of growth) does have some impact on psychological development. By psychological development he refers to mental and emotional development, and to the acquisition of skilled motor performances and general personal-social effectiveness. It is clear that Tanner considers individual differences in tempo to be reasonably stable; the result is that small individual differences in early childhood become magnified into appreciable differences in later childhood and adolescence, throwing some children considerably ahead of or behind the generality. Can such evenness in tempo be taken for granted throughout development? Asynchrony of growth in the social group has a marked impact on behavior at adolescence, as the work of Mary Cover Jones, Nancy Bayley, and others has shown. Because rates in various dimensions of growth tend to be correlated within the individual, one may speak guardedly of general retardation or acceleration. Because this correlation is considerably less than perfect, one physical or psychological dimension may in some individuals fall considerably behind or outstrip another dimension. Such asynchrony within the person is presumed to have pronounced consequences in performance and adjustment also. This hypothesis has appeared before in the literature of child development, but has never been successfully substantiated on other than a clinical basis. Certainly no firm law or principle can be derived from scattered, deviant cases.

THE CHAPTER on the general course of children's growth from infancy to maturity incorporates the important contributions by Scammon, Shuttleworth, Maresh, Harold Jones, and others (there is, surprisingly, only one reference to Meredith, none to Boyd, Garn, and Krogman). Tanner relates this material to a concept of developmental age, based on several interrelated measures of physiological maturity. This age-oriented concept is not as broad as Willard Olson's *Organismic Age*, and includes indices of sexual maturity.

The chapter on the organization of the growth process is of particular importance to child development. Concepts that are treated in this chapter include growth gradients, critical periods in growth, stages of development both general and singular, and the problem of prediction of mature dimensions from dimensions in childhood. Similar concepts have been used in developmental analysis of children's behavior and experience. Tanner's evaluation of these concepts is instructive to those who would use such concepts to illuminate behavior. The discussion of stages raises the familiar question of continuity versus discontinuity. Tanner settles for continuity (change by infinitely small increments) in physical growth, and expects to find discontinuous stages only in complex functions, that is, functions for which many parts of the brain and nervous system must be integrated. It may well be that the apparent discontinuous character of complex behavioral development arises more from attention to gross, general properties of such phenomena, for most analytical studies of performance dissect away the apparent or phenomenal discontinuity.

The chapter on the growth and development of the human brain, in which Tanner summarizes much scattered and some very recent work, should be particularly valuable to many non-specialists in physical growth; it is a convenient approach to an important literature. This discussion once again underlines how quickly function follows upon the development of structure. Thus we are reacquainted with the maturation hypothesis. How growth permits behavior forms to appear is not clear; the author does not resolve the question of whether myelinization of neural fibers is necessary for conductivity, a point upon which there has been some debate in recent years. Naturally, such a discussion of structure and function recalls earlier controversies over maturation and learning. From the review in this chapter this old controversy would seem still to have significance. Tanner's summary of the development of the EEG presents the general picture of knowledge at the present time, but is much too brief for the serious student, who will have to go to sources suggested by Tanner.

Tanner's particular interest in adolescent growth changes is revealed in two ways—in his brief but comprehensive chapter on the secular trend toward earlier physiological maturity, exhibited in the accumulated data of the past 100 years, and in his excellent treatment of the physical and physiological changes of puberty. He suggests rather than discusses in detail the psychological and adjustmental significance of these changes. Again the reader is challenged to infer the obvious relationships to behavior and adjustment.

The concluding chapter is a summary of the book as a whole. This reviewer wishes the author had used for this chapter the title he suggests as relevant but discarded as too "catch penny:" "Questions teachers should ask themselves." One may agree heartily that "only teachers themselves can discover and develop the full implications for education of these findings on physical growth;" unfortunately, teachers are not likely to raise such questions by themselves. One wishes the author had been more explicit, at least offering some examples.

Echo Rangers of the Sea

Winthrop N. Kellogg

Porpoises and Sonar. Chicago: University of Chicago Press, 1961. Pp. xiv + 177. $4.50.

Reviewed by FREDERIC A. WEBSTER

The author, Winthrop N. Kellogg, is professor of experimental psychology at Florida State University. He is known to all psychologists and to many thousands of students for his 1933 book The Ape and the Child. *His subsequent contributions have been numerous and equally significant, though perhaps less widely visible. Fred Webster, the reviewer, describes himself as an expert on the way in which a particular bat* (Myotis Lucifugus) *intercepts a particular airborne target (a catapulted mealworm). He has also worked on the physiology of exercise, on the detection of auditory signals in noise (with S. S. Stevens), on a conceptual model for perceptual organization (with Norbert Wiener), on digital computers and the tracking of aircraft, and on computer models of nerve nets. Now he is laboring when time permits on a book dealing with mechanized systems that learn to learn.*

IN RECENT years the legendary porpoise is rising again to eminence. Intelligent, vocal, playful, remarkably skilled despite its lack of hands, the porpoise, under modern techniques of study, is proving a marvelously human creature. Beyond its human traits and abilities the porpoise appears to embody what is likely to prove the most intricate and subtle echo-ranging system known to man. In this book Kellogg deals with the porpoise both as a very interesting animal and as a possessor of "sonar." It is important to note that the title of the book is not *The Sonar of Porpoises,* for such a title would imply a treatment quite different from that found here.

From a technical point of view Kellogg's measures and analyses of the porpoise's sonar system are in some respects inadequate, in others perhaps even doubtful. The sonar engineer, for example, might well object to interpretations put on frequency analysis reaching considerably beyond the normal range of the equipment, and inadequately controlled. Certainly he would like a more complete rendering of the use of high-pass filters in the experiments. He would also like more complete and detailed illustrations of representative pulses and pulse trains. The sensory physiologist might be disturbed by gaps in the tests of a sonar system, notably the absence of masking experiments with white noise, and the lack of comparisons between natural and experimental conditions. The general reader, moreover, might feel at a loss from the lack of any systematic introduction to sonar systems, their problems and their theoretical limitations. It is fair to say, perhaps, that the book is not fundamentally sonar-oriented.

One must ask, however, if such a systematic and comprehensive introduction to natural sonar was the intent of the author. Basically the book appears to have two aims. First, it seems designed to provide the general reader with an interesting, well-rounded introduction to one of the world's most fascinating and challenging creatures. Second, it describes in thorough detail the experiments used to answer certain selected questions about the animal's echo-ranging system. Throughout the accounts, the reader gains the feeling that the author is perpetually fascinated by the creature itself. To him the porpoise is as a child prodigy of mathematical talent; but his attention is more arrested by the child and its range of interests, responses and motivations than

WINTHROP N. KELLOGG

by the mathematical techniques it uses. Thus, while the details of experimental techniques are meticulously explicit, the account never becomes cold and impersonal.

THE VIVID, human qualities of the porpoise have been legendary from ancient times although the accounts probably refer to the so-called "common dolphin" rather than to the "bottlenose dolphin" (alias "shallow-water porpoise") of the present experiments. Tales of playfulness, eagerness for human friendship and the timely rescue of drowning persons are recorded in the literature from the sixth century BC. Long regarded as pure legends, such stories now gain backing in documented events. Recent evidence, moreover, suggests that the porpoise may emerge as the most intelligent of all animals next to man himself. Hence its growing prominence in works of fact and fancy: the serious studies of Lilly, for example, or the satiric treatment by Szillard. Ancient accounts come back to life.

Experimental approach to the porpoise's true capacities, however, is not easy. An animal that lives in an environment so vast and alien as the ocean presents experimental problems of quite a different scale from laboratory studies on the white rat. The reader gains a picture of some of the problems in the thorough, ingenious and painstaking experiments so clearly described and illustrated in chapters 7, 8 & 9 of the present book. The description of techniques and precautions deserves special attention as a model of experimental precision and care.

Obviously, countless questions remain unanswered. Very great and unguessed differences may exist between events observed in a small pool and those occurring in the ocean. The tiny sample of skills and methods studied in the pool may give a somewhat distorted and misleading picture of the creature's normal capacities and methods. Certainly realistic and adequate exploration of the signal-reception system has just begun. Special features that may characterize the porpoise's methods of information processing for complex reflected returns are wholly unknown. The accoustical analyzing system of the porpoise is perhaps 100,000 times as large as the pencil-tip size of the world's other outstanding sonar-guided family, the insectivorous bats. If the bat, with its tiny analyzer, can guide itself rapidly through very complex spaces—making precise and high-speed discriminations and interceptions along the way—what does the porpoise do with its enormous analyzer? This is but one of many puzzles; and under the stimulus of the present book inquisitive readers are not likely to leave untouched whatever future writings tell further of the amazing mysteries of this creature.

Again, inventive genius required pleasurable mental activity as a condition for its vigorous exercise. "Necessity is the mother of invention" is a silly proverb. "Necessity is the mother of futile dodges" is much nearer the truth. The basis of the growth of modern invention is science and science is almost wholly the outgrowth of pleasurable intellectual curiosity.

—A. N. WHITEHEAD

An Essay Assayed

Andrew Gemant

The Nature of Genius. Springfield, Ill.: Charles C Thomas, 1961. Pp. x + 206. $6.50.

Reviewed by MERVILLE C. SHAW

The author, who obtained an MD degree from the University of Budapest in 1919 and a PhD in physics from the University of Berlin in 1922, is presently a research associate, working on biochemical problems, at Grace Hospital, Detroit. The reviewer, Merville C. Shaw II, is an associate professor of psychology at Chico State College, California. In addition to his academic chores he carries on research on the use, misuse and particularly the disuse of academic potential. He presently is immersed in a research project on academic underachievement. When he has spare time he fishes, and doesn't care what bites, or camps with his family, and does.

THE EVER fascinating topic of genius has been the subject of much more speculation than it has research. The present volume is no exception to the general rule. Billed by the publisher as a "fascinating study," it actually represents the individual thought of the author with respect to the characteristics of the genius and his work. By way of emphasizing this individuality of thought, it can be pointed out that not a single reference to other works on the same or related topics sully the pages of this work. This holds true even when such research and opinion is available, unless the name of Lombroso, appearing in a parenthesis and without specific reference to any of his writings, can be considered an exception. The reader interested in documentation, proof, diagrams, or statistics will derive small satisfaction here. The only numbers which appear in printed form are the page numbers.

The author's knowledge of generally recognized men of genius is monumental. Their work, antecedents, behavior, and values are consistently and accu-

rately referred to. And yet, the reader is frequently more teased than pleased with the bits and snatches of life which come thick and fast in the text. Frequent generalizations from individual cases are to be found, as are interpretations of behavior which might not be generally agreed upon.

Genius is defined in a very restricted sense of the word and, by inference at least, includes the requirement of social value. Certain kinds of occupations are arbitrarily excluded from those in which work of genius caliber may be found. Military men, financial wizards, and statesmen are among those who cannot qualify as geniuses in terms of the author's definition. While having no reservations with respect to philosophy and the arts as fields in which the genius may be found, the author, after some rather laborious soul searching, includes science as well. The ladies of the AAUW (or of the APA for that matter) will not be pleased to know that a woman cannot, except in exceedingly rare cases, meet the criteria of genius, although this idea may provide much comfort to the regular clientele of *True* magazine.

Ten essential characteristics of genius are proposed, and, since they are admittedly subjective, little quarrel can be raised with them except in terms of their outcomes. Using these criteria, Chaucer, for example, is consigned to the ranks without any regard for the status of Western civilization at the time at which Chaucer lived nor of his relative eminence with respect to his contemporaries. These criteria have a number of general ramifications of real interest. The genius is pictured as a compulsive creator without control over his own creative urges. Environment in general, education in particular, is presumed to have little effect on him; he will emerge regardless of his environment. The emphasis on the great impact of hereditary factors and a strong de-emphasis with respect to the importance of environmental conditions are consistent trends throughout the book.

This work should not be read in hopes of obtaining empirical information relative to genius, since it is strictly the interpretive view of a single author. If, on the other hand, it is read with a view to formulating hypotheses for further testing, to get one man's particular view of genius, or to obtain short but interesting glimpses into the lives of recognized geniuses, it may be worthwhile.

The Rational and Irrational Mixed

Ernest Becker

Zen: A Rational Critique. New York: W. W. Norton, 1961. Pp. 192. $4.00.

Reviewed by David Smillie

Ernest Becker is an instructor in cultural anthropology in the department of psychiatry of the State University of New York Upstate Medical Center at Syracuse, New York. This book, his first, has grown out of his PhD dissertation in anthropology at Syracuse University. David Smillie, the reviewer, is a Cornell PhD who spent some years teaching and doing research in child development at the Merrill-Palmer Institute in Detroit before spending a Fullbright year in India and a Smillie year as a special student at Harvard where he studied philosophy. In the middle of the latter year he completed the present review.

Zen is a Japanese branch of Buddhism which has recently received a great deal of attention on the contemporary intellectual scene in America. It is a mystical philosophy which is essentially irrational in its appeal to immediate, unanalyzed experience rather than to a set of logical assumptions about the world. The popularity of Zen in the West may well be due to its emphasis upon a direct and spontaneous response to the world. Ernest Becker's book, *Zen: A Rational Critique,* is an attack upon Zen in its role as a message of salvation to Western culture. He is particularly concerned with the influence Zen is having on psychotherapy in this country.

In the introduction to his book Becker says, "Zen really is . . . a negation of the Western ethic of individuation and autonomy which was so laboriously fashioned by Mediterranean civilization." A careful documentation of this statement, providing a better understanding of ourselves through a critique of Zen, might have made an important contribution to our literature. But Becker almost immediately enters into a polemic in which both psychoanalysis and Zen are castigated for failing to respect the integrity of the individual and are ultimately associated with 'brainwashing' as a denial of all that we ought to be preserving in our culture. Becker's discussion of Zen seems aimed at illustrating the malevolent intent of this philosophy to 'infantilize' the individual through pressure and frustration until he becomes submissive to the overriding ideology of a master. Throughout the book one misses a dispassionate picture of a philosophy arising from a culture very different from ours, with a message which is strange to many Western ears. Becker is presenting a partisan argument which fails to live up to the description 'rational' in its best meaning.

However Becker is dealing with an issue important for psychologists and for those who are concerned with the broad question of the values of autonomy and individuality in the West. On the one hand, proponents of Zen are suggesting that the development of a sense of self as separated and isolated from the environment is a fundamental problem for us in Western culture. They are suggesting that our preoccupation with an individualistic ego, our concern with controlling and dominating the environment has resulted in a state of man alienated and cut off from nature. From this point of view we may once again experience an immediate and uncomplicated relation to our world through a renunciation of our reliance upon logic and reason. On the other hand, the opponents of Zen, represented in this case by Becker, are suggesting that our basic problem consists of a failure to develop our ego sufficiently. Because we fail to concern ourselves with man's

independence and autonomy we have failed to live up to our valid ideals of a rational existence. From this point of view we must learn to resist the temptation to be like children who act on impulse and we must learn to assert our independence and our ability to control our own destiny.

Becker fails to do more than state the case for one side of this argument. Because his stand is extreme, his is a position of articulating stereotypes which are neither reasonable nor convincing. However those who are concerned about the threat to our dignity and our autonomy from alien sources will find here a support for their concern and a bolstering of their arguments.

Statistics, Groups, Games and Learning

Patrick Suppes and **Richard C. Atkinson**

Markov Learning Models for Multi-Person Interactions. Stanford, Calif.: Stanford University Press, 1960. Pp. xii + 296. $8.25.

Reviewed by FRANK RESTLE

Both Patrick Suppes and Richard C. Atkinson are presently at Stanford's Institute for Mathematical Studies in the Social Sciences, though Atkinson did not get there until after the present book was completed. Suppes, the director of the Institute, has written extensively on logic, axiomatic mechanics, philosophy of science, the theory of measurement and, in the Journal of Experimental Psychology, *on mathematical learning theory. His books include* Introduction to Logic *(1957),* Decision Making: An Experimental Approach *(1957) and* Axiomatic Set Theory *(1960). Richard Atkinson, a psychologist, has done his principal research and publishing in the area of mathematical learning theory. Now, among other things, he is working on the acquisition of reading skills by young children. Frank Restle, the reviewer, is the author of* Psychology of Judgment and Choice *(1961) soon to be reviewed in* CP. *In this book he applied logical and mathematical thinking to problems in motivation, learning, psychophysics and to problem solving in groups. His journal publications have dealt mostly with discrimination learning and concept formation. Currently he is trying to apply mathematical methods to the cognitive theories of Lashley, Dunker, Lewin and others. At the time he prepared the present review he was Visiting Associate Professor of Psychology at Indiana University, on leave from Michigan State University.*

THIS book stands at the intersection of statistical learning theory, game theory, and small group interaction theory. The two-choice prediction experiment, workhorse of statistical learning theory, is made social by using two subjects, and by making the probabilities of events depend jointly on the responses of both subjects. Models drawn from statistical learning theory are devised and used to analyze the experimental results. The contingencies of events on responses are arranged like the payoff matrices of game theory, so that the learning models can be compared with predictions from game theory. More than a quarter-million responses from more than 1000 subjects were collected for this book, and the analysis is more detailed than one would find in the *Journal of Experimental Psychology.* Experiments include games with various amounts of information passed from one subject to the other, including one study using monetary payoffs, and a study of a kind of paired-comparisons.

Within learning theory, the book is a valuable contribution to methods of analysis. The long second chapter gives the best available discussion of Markov (particularly one-stimulus-element) models, with special attention to estimates of parameters and tests of hypotheses. These methods are used over and over in the book, so that the reader can learn many practical statistical methods which appear in no previous text.

Suppes and Atkinson use, as their main tool, an all-or-nothing version of stimulus sampling theory. Unlike continuous linear models which become hopelessly complex, the all-or-nothing model can predict interactions, though even here high-speed computers are used. The all-or-nothing theory is very good at predicting over-all levels of performance, in a wide variety of experiments, but does not handle detailed sequential predictions correctly. A two-element model does much better in detail but is very unwieldy when general outcomes are to be predicted. A "generalized conditioning model" is also applied to the data. The procedure is to fit a first-order Markov chain to the data of each subject in the dyad, then construct the theoretical chain for the dyad and compare this with the first-order frequencies of dyad performance. The authors do not make it clear what is happening, so that the reader may be led to believe that these are good predictions. Actually, the data used for estimation are almost the same as the data predicted, except for dyadic interactions which do not depend upon reinforcing lights. Since the subjects are in separate cubicles connected only through reinforcing lights, the success of the predictions is not surprising.

The authors do not explain all the details they find in their data, but their stimulus-sampling models are much closer to the fact than the game-theory interpretations. Besides, they analyze the whole dynamic process of interaction, whereas available alternative theories are all static and, in terms of factual prediction, relatively superficial.

With its virtues, the book has faults. The writing is sometimes numbingly explicit. The equations, written with a logician's loving care for exactness, are formidable thickets of subscripts and parentheses. Much of the mathematical development is routine, some is insightful and interesting, but all is presented in the same earnest tone. However, these criticisms are basically esthetic, and the book is more a progress report than a work of art.

The authors and others are already using the methods given in this book to design and analyze new experiments. There can be no retreat from the standards of exactness and detail set in this book. Serious minded psychologists and social scientists who wish to study human interaction as a laboratory science have no choice—they must take out pencil and pad, and work through this volume. Fair warning is issued, in the last chapter, that conformity, economic oligopoly, and continuous response variables are under scrutiny, and these laboratory and mathematical methods will be applied to new fields of investigation.

Issues Und-verbindungen

Henryk Misiak

The Philosophical Roots of Scientific Psychology. New York: Fordham University Press, 1961. Pp. xiv + 142. $3.00.

Reviewed by FELIX E. GOODSON

Henryk Misiak is a native of Poland who holds the degree of Master of Theology from Lwow and who took a Doctorate in Psychology at Fordham University, where he now teaches. In 1954 he published, with Virginia M. Staudt, Catholics in Psychology: A Historical Survey. *The reviewer, Felix E. Goodson, is an experimental psychologist who teaches at DePauw University and maintains a high fascination with philosophical problems, particularly those which psychology has inherited from philosophy. He now is working toward a theory-and-history book to be entitled* Themes in the History of Psychology.

IN the preface the author states that his purpose is "to present the philosophical roots of scientific psychology in a simple manner and in concise form" rather than to treat "exhaustively the complete philosophical foundation of psychology." In endeavoring to realize this modest statement of intent the author emphasizes four basic themes; namely, mind-body dualism, empiricism, sensationism, and associationism, as characteristic of scientific psychology and spends the majority of his book tracing back into philosophy the origins of these themes.

Although the book contains only seven short chapters each of these is divided up into numerous sub-topics. Herein lies one of the basic difficulties of the text. The method of presentation is simply to state a topic heading and then spend somewhere between a half page and two pages discussing that particular issue. For example, in Chapter 3 on mind-body dualism the author allows only 12 pages for a discussion of the following topics: "The Meaning of Dualism," "Body-Mind Problem," "Aristotle's Hylomorphism," "The Cartesian Dualism," "The Difficulties With The Cartesian Doctrine of Interaction," "Leibnitz," "Parallelism," "Leibnitzian Heritage," "Christian Wolff," and "The First Attempt at Experimental Psychology." These topics are considered in the above sequence and are all on the same organizational level. Throughout the book, as in this example, the sequence and organization of the material is somewhat capricious with little apparent concern for historical or logical development or level of inclusiveness.

The number and relative weighting of the various topics considered is also disappointing. While half of the book is given over to the related topics of sensationism, empiricism and associationism, such issues as nativism, operationism, determinism, idealism, realism, and hedonism are sparcely treated or omitted altogether. It might be contended that the choice and emphasis of topics could be justified on the ground that the book deals with the roots of a *scientific* psychology defined in terms of structuralism, as indeed the author implies, were it not for the inclusion of such topic headings as "Henri Bergson," "Neoscholasticism," "The Christian Era," "Scholastic Philosophy," and "Marxism." Further, the issue of "mind-body dualism," considering the space allotted to other topics, might have been deemphasized since there would be much debate concerning its relative contribution even to Wundt's particular brand of scientific psychology.

The greatest weakness of the book, however, lies in the area of explication. Topics and issues are often simply enumerated and described rather than explained and integrated with relevant material. As an example the author makes the following statement about Lotze's theory of space perception: "Keenly interested in the explanation of space-perception like many of his contemporaries, he developed the hypothesis of 'Local signs.' In this hypothesis he argues in favor of retinal areas and skin spots associated with certain visual or tactual sensations as being the most important factors in the perception of space." After this description, correct as far as it goes, the author then states, "It is obvious that such an explanation favors the empirical origin of both the concept and the perception of space . . ." Obvious indeed! Further, there is no effort made to relate Lotze's theory with similar positions such as those represented in Berkeley's new theory of vision, and Helmholtz's doctrine of unconscious inference. This tendency to substitute superficial description for explanation and integration, when coupled with the 'piece-meal' approach mentioned above makes it difficult for the student to grasp and remember the material. What on superficial examination appears to be a simple book thus actually presupposes more than a casual familiarity with the history of psychology before many of the issues considered can be understood.

A Multitude of Therapies

Morris I. Stein (Ed.)

Contemporary Psychotherapies. New York: Free Press of Glencoe, 1961. Pp. x + 386. $7.50.

Reviewed by RALPH W. HEINE

The editor, Morris I. Stein, is Professor of Psychology and Director of the Research Center for Human Relations at New York University. The series of lectures presented in the present volume he organized while he was at the University of Chicago and while serving there as chairman of the Interdepartmental Committee on Clinical and Counseling Psychology. His earlier books include The Thematic Apperception Test: A Manual for Its Clinical Use with Adults *and, as co-author with George G. Stern and Benjamin S. Bloom,* Methods in Personality Assessment. *Ralph W. Heine, the reviewer, is an associate professor of psychology in the departments of psychiatry and psychology in the appropriate divisions of the University of Chicago. In both departments he is involved in the training of clinical psychologists and persists in his curiosity about what actually happens in the therapeutic process. Currently he is studying effect on therapeutic outcome of patient-therapist similarities. For some years he has served as a director of the American Board of Examiners in Professional Psychology and is presently the Vice President of that Board.*

THE series of lectures which, revised and supplemented, comprise this book was planned by the Editor in 1958 to give audiences at the University of Chicago authentic statements about the significant issues at the core of present day theory and practice in psychotherapy. In addition, there were papers which described newly developed techniques in group and family therapy.

No one can seriously quarrel over the choice of spokesmen for the various approaches to psychotherapy for almost without exception they are figures of national reputation who are closely identified with or, indeed, are among the originators of the theses they defend. They are as follows: Nathan W. Ackerman, MD (Family Therapy), Rudolf Dreikurs, MD (Adlerian), Jerome D. Frank, MD, PhD (Group Therapy), Roy R. Grinker, MD (Transactional), Don D. Jackson, MD (Interactional), Aaron Karush, MD (Reparative-Adaptational), Arthur A. Miller, MD (Psychoanalytic), Rollo May, PhD (Existential), Carl R. Rogers, MD (Client-Centered), Otto A. Will, Jr., MD (Interpersonal).

Because of its faithful representation in summary of the contemporary status of psychotherapeutic theory and practice, the book could be used by the clinical faculties in both psychology and psychiatry as an introductory text. Many of the participants have published more extensive expositions of their beliefs and these, together with other selected references listed in the bibliography, provide an excellent guide for the further reading of interested students.

Although no single outline of presentation is followed systematically in all chapters, most of the contributors briefly outline antecedents of their position before developing their current viewpoints on the characteristics of a helping relationship, the role of the therapist, transference and countertransference, and personality changes resulting from psychotherapy. Most of the authors present case material to illustrate psychotherapeutic techniques consonant with their conceptualization of the process.

Since it is beyond the scope of this review to treat each lecture separately, it would be convenient to be able to report a high level of convergence in points-of-view. Unfortunately, there are rather fewer communalities than differences to be discerned in this sampling of present-day theorizing about the psychotherapeutic process.

This is not to deny that the contributors do cluster on certain issues if it can be assumed that somewhat similar terms have similar meanings for the various authors. The greatest unanimity centers in the role assigned to the therapist for, with the exception of Miller who adheres to the classical view of the therapist as a mirror (despite the fact that the mirror concept is somewhat tarnished by criticism developing within the psychoanalytic school itself) there is enthusiasm among the contributors for a two-way therapist-patient interaction. The implication is that the ongoing relationship with the therapist as a person in his own right can be a beneficial corrective experience. The therapist no longer hides behind a blank screen on which the patient projects the envies, jealousies, frustrations, disappointments, loves and hates evoked by significant figures in the past. Rather, he lets himself be known as a person and it is in the process of coming to understand what characteristics the therapist does and does not have that the patient divests himself of handicapping distortions in his perception of himself and others.

The only shortcoming in this generalization is that one cannot ascertain from the brief expositions in this book, that for example, Grinker's "transactions" are more alike than different from May's "encounters," Jackson's "interactions," Will's "participation," Rogers' "being" or Ackerman's movement "into the center of the family disturbance."

Although there is some convergence with respect to the elevation to a place of importance of the "actual" relationship with the therapist, deep and significant differences in theory remain. These at bottom reflect long-standing alternative conceptions of the nature of man—whether, as May quotes from St. Augustine, "The innocence of the child

consists of weakness of limb" or following Rousseau, man is exclusively a product of his social and interpersonal milieu. May, Rogers and Dreikurs cluster around the latter position while the remainder find places on the continuum extending to the former.

Few will contest that ideas about the nature of man are more exciting than data about his behavior, but it would be interesting to know whether the therapists's theoretical beliefs do indeed have the primary determining effect on his therapeutic maneuvers and on the observable outcome of his treatment of patients. Among the ten contributors, only Frank, Jackson and Rogers suggest that they regularly record their therapeutic operations on tape, thus making them available for objective analysis. Until adequate samples of the therapeutic work of adherents to all schools are routinely available for systematic study, one has little reason to anticipate that strong conviction about psychotherapy will give way to empirically based principles of psychotherapy.

On Love And Other Things

Clemens E. Benda

The Image of Love: Modern Trends in Psychiatric Thinking. New York: Free Press of Glencoe, 1961. Pp. xviii + 206. $5.00.

Reviewed by ERNEST G. SCHACHTEL

Clemens E. Benda is assistant psychiatrist at the Massachusetts General Hospital, Director of Psychiatry and Research at the Walter E. Fernald State School and Associate Professor of Abnormal Psychology at Clark University. His earlier books have dealt with mongolism, cretinism and the cerebral palsied. Ernest G. Schachtel, the reviewer, is a Supervising and Training Analyst at the William Alanson White Institute and, at the same time, Adjunct Professor of Psychology in the Post-doctoral Training Program at New York University. He has written and lectured on Rorschach's Test, has worked with the Glueck's on their criminological research, has been associated with Columbia's Institute for Social Research and has authored a book, Metamorphosis: On the Development of Affect, Perception, Attention and Memory *(Basic Books, 1959).*

THIS is neither a book on man's image of love nor on modern psychiatry's views of love, as the title leads the reader to expect. Rather, it is a collection of essays ranging over a variety of subjects. The author emphasizes as his central thesis that human understanding depends on "a grasp of the imagery of the world in which each individual lives." Some of the essays deal, indeed, with the subjective meanings of imagery and language in the personal worlds of people. Thus, they are part of a long human discourse. One side of this discourse may be traced back to Heraclitus' (500 B.C.) comparison of the personal world to that of sleep and dream and to his teaching that man should turn away from this personal world and think and act in accordance with the Logos common to those who are truly awake. The other side can be seen in the modern interest in the personal world. This interest has roots, in biology, in the 'Umwelt'—research of the late Jakob von Uexkull who, in a book on the personal worlds of some of his friends, wrote that "the study of Umwelt is a kind of psychology transposed outward;" and, in the psychology of man, especially in the work of authors interested in the phenomenological and existentialist viewpoints.

The author shares the existentialist approach. While he does not break new ground his book shows throughout a questioning, stimulating and thoughtful mind, with a background in psychiatry, philosophy and linguistics. A reader who does not blind himself against the author's viewpoint will have the refreshing experience of listening to somebody who does not merely repeat what others have said but who has thought about it and expresses it in his own way. The book is critical of Freud's emphasis on the sexual drive and of his libido and ego theories. One is puzzled about the absence of any reference to the work of the Neo-Freudians (except Jung and Adler) although their viewpoint regarding many problems is close to, or identical with, the author's, for example, there is Fromm's work on alienation and abstractification and the reviewer's work on the relation between language, cultural clichés and experience. In the chapter "Sexuality and Love" the author rightly emphasizes the importance of the change from a state of being in love into active love, in the sense of loving another person. He asserts that no one "has dared face (this problem) squarely." He seems unacquainted with Fromm's *The Art of Loving* which deals more fully and penetratingly with this problem.

In the concluding essay "Freedom and Will" the interesting point is made that will is not a human faculty, in addition to other faculties, but a state of personality development in which the person can say "I will do this" and thereby preserve his identity through the change of time. To remove will from a psychology of 'faculties' and place it in a dynamic, developmental framework is a helpful idea. But it is a one-sided emphasis to link the problem of identity solely with the maintenance of consciously and deliberately chosen goals and purposes and thus with the attitude to the future, and not also with the knowledge and acceptance of one's roots in the personal past. This bias is typical of much of existentialist thought which tends to neglect the significance of the past.

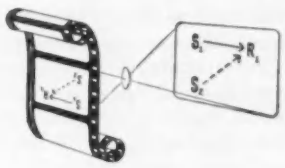
No reader is likely to agree with everything in a book covering such a wide variety of topics, but if its purpose is to stimulate the reader to re-think his own and the author's views, this volume should be rewarding reading.

The specialist works like a larva perched on a leaf cherishing the illusion that his little world flutters isolated in space.

—S. RAMÓN Y CAJAL

INSTRUCTIONAL MEDIA

Edited by A. A. Lumsdaine



Statistics: Sampling and Simplification

John and Elizabeth Morse

The Morse Sampler Kit. Produced by J. & E. Morse, Partners, 142 West Lake Road, Penn Yan, New York. Single kits, complete, $7.75 ($7.50 pre-paid); orders of 20 or more kits, $7.25 each. Expendable test materials, $1.00 per set.

Reviewed by THEODORE R. HUSEK

The reviewer, who took his PhD at the University of Illinois in psychological measurement with Lee Cronbach, is now Assistant Professor in the School of Education at the University of California, Los Angeles. Currently he is teaching his twelfth class in elementary statistics. His research has been mostly in the areas of response styles, anxiety measurement, and attitude change. A dominant interest more lately has been in behavior science applications to the problems of international conflict resolution.

THE introductions of many elementary statistics texts are apprehensive about a specter of fear and approaching dullness that seems to haunt the souls of students as they embark on the dangerous and uncharted sea of their first course in statistics. The Morse Sampler Kit provides a treatment for this malady—exorcism. The fear is removed by the teaching of basic concepts about statistics without the use of the word statistics, the emotional involvement of symbols, or even square roots. Statistics becomes fun by allowing the students to learn by playing games.

Developed in connection with courses in statistics and psychology at Hobart and William Smith Colleges, the Kit is for use, according to the pamphlet accompanying it, as an adjunct to regular material in college statistics and psychology courses. The pamphlet also says it has been used profitably in secondary schools by both general science and mathematics teachers.

The Kit contains: (a) a student's booklet, *Scientific Inference* ("Science" apparently doesn't carry the stigma that "statistics" does.), (b) three samplers, boxes containing small colored spheres, and (c) experimental materials. The student's booklet is the most intriguing but least satisfying part of the three. It is orange, measures less than 4½ inches by 4½ inches, and contains 56 pages of text, one page of instructions for the physical handling of the samplers, and a one-page preface and introduction which is located after the text material because "it seemed more strategic to start right in, without mentioning the word STATISTICS" (sic).

The small size of the booklet belies its scope. The first section differentiates between deductive and inductive reasoning. More than a page is used to discuss applied versus basic research, with a quote attributed to the National Science Foundation at the beginning, a discourse on the French revolution in the middle, and a pitch for votes for basic research near the end. There are quotes from, among others, Plato, Werner Heisenberg, and Bertrand Russell. The terms "central limit theorem" and "point of inflection" are introduced. The meaning of measurement is treated, as is the nature of Type I and Type II errors. In addition, "probability" and "random sampling" are defined, experiments to illustrate sampling distributions, estimation, and hypothesis testing are described, and the nature of science is discussed.

It would be a difficult task to include all this material, and more which has not been described, in a booklet so small without sacrificing accuracy of explanation. The text is far from successful in this endeavor. Although there is surprisingly little that definitely is incorrect, and there are several impressive and ingenious explanations of difficult topics, the inaccuracies, such as the use of the term "standard error of estimate" when talking about the variability of means, and the inadequacies far outweigh the virtues in the presentation. Whether a longer booklet would solve these problems is unknown; the present text possesses them in quantity.

The awesome range of topics covered is also confusing in view of the avoidance of the emotional overtones of the word "statistics." In addition, although difficult phrases and words are used, the writing seems to be slanted for a very bright but immature high school freshman and it is also affected and contrived. For example, a section entitled "A Practical Problem" begins, "Don't move! Just because the word 'practical' is used, don't assume action without thought. This is probably the first time in your life when you have experienced the need to exercise your *imagination* and at the same time be extremely *practical*, specific and rigorous in definitions."

THE three little samplers in the Kit are used in experiments described in the booklet, but they can also be used without the text. Each of them is sealed and holds a number of tiny balls. In two of the samplers the little balls are red or white, and the third contains balls with numbers on them. There is a little window at one side of the bottom of each and, by clever handling of the samplers, samples of different sizes

can be drawn to illustrate various points to be made about statistics. The little plastic containers are fun to play with. The reviewer enjoyed them and some members of his introductory class in statistics did also. Unfortunately both the reviewer and the class members felt that the amount of time required did not warrant their use, and that if some form of game were required, judicious combinations of decks of ordinary playing cards or similar devices such as boxes of coins would serve just as well. The samplers have one advantage over techniques like the cards—the total number of balls in each sampler is hidden from view; but this advantage is not important and does not balance the difference in costs.

In summary, if the instructor in elementary statistics feels that he would like to make statistics fun and reduce emotions in his students, some packs of cards and a supply of tranquilizers would be a better buy than the Morse Sampler Kits.

This cavalier dismissal of the Kit leaves unresolved the important problem which the Kit was designed to alleviate. Many students do approach introductory statistics timidly and apprehensively, and in many schools the course has obtained the reputation of being uninteresting. The fear is sometimes a function of perceived difficulty, sometimes a function of the newness of the material, and sometimes a function of the interaction of the two. Often the perceived difficulty itself is confounded with an apparently deep-seated fear of anything that has numbers in it. (How many elementary and secondary school mathematics teachers would survive the holocaust of which their ex-students sometimes dream?) At times the dullness results from bad teaching, at times from the seeming inappropriateness of the subject matter to the interests and life of the students, and at times from a combination of these.

Perhaps the fear of mathematics and anything related to it will lessen as the new mathematics programs gradually develop and spread. Bad teaching is certainly correctable. An intelligent choice of examples, well presented, can often make statistics more relevant to the student's life. There are many gimmicks such as the little Morse sampler boxes which can also be used profitably; most instructors are fully aware of many of these. But some of the problems in teaching elementary statistics result from the nature of the student population in these courses.

In the reviewer's experience, the students in such a class are usually heterogeneous in ability and plans. Sometimes in psychology departments there is a special class section or two for certain selected students, but usually not; special grouping is even less common in departments of education.

Some students in statistics are prospective active users of what they will learn, e.g., future researchers who will need to know how to select and apply various statistical techniques. It is important for these students to obtain a good grounding that includes instruction about and practice in the computation and actual application of statistical techniques as well as the development of knowledge of formulas and the manipulation of symbols in statistics. Other students are not potential users of the techniques themselves, but are prospective consumers of the results of the application of statistical techniques. A general knowledge of statistics is important for these students, but they do not need to know the intricacies of the techniques; they will probably never perform an experiment or work through an analysis of variance themselves.

Courses in statistics are usually set up for the first of these two groups, in some cases because they are often brighter and more like the instructor, who is usually a researcher himself. Compromise courses where the computation of solutions, derivation of formulas, and general use of numbers and symbols are played down sometimes occur; but, whereas the former courses make the potential consumers of results suffer, the latter kind of course often makes everyone suffer, including the instructor.

Two different courses in elementary statistics would mitigate the problem. One would be the course as it is usually presented. The other would be a course in which the basic concepts are presented rigorously but largely without computations, symbols, and numbers. This second course is possible but quite different from the first. The Morse booklet was an unsuccessful attempt at an auxiliary text for such a course. The analogy between the teaching of statistics and the teaching of art is not completely inappropriate. There are some art classes for students who plan to become artists and other classes for those who would like to understand and appreciate the products of artists.

The arguments that the students in statistics should know the formulas and have practice in computation falls on the deaf ears of many students who never use this part of their learning but rather forget the whole course as quickly as possible. Some of these students have argued convincingly that the time spent watching or performing computations could have been better and more pleasurably spent learning additional aspects of the basic nature of statistics, which would result in something more useful for them and also in something they might not try to forget so quickly.

Although the development of two different kinds of elementary statistics classes would seem to be the solution to some of the problems of these courses, some departments cannot support more than one section. Even for these departments there is something to hope for; the development of adequate programed instruction may make it possible in the future to have one's cake and eat it too by having several courses in one.

Programed Instruction Publications

Aside from a scattering of earlier journal articles and mimeographed papers, the now burgeoning published literature on teaching machines and programed instruction got off to a start with Wiley's publication, in 1959, of Eugene Galanter's *Automatic Teaching: The State of the Art* (see Rothkopf's

review, *CP*, March 1960, **5**, 104-05). This brief symposium report was followed a year later by the massive compilation, *Teaching Machines and Programmed Learning*, edited by Lumsdaine and Glaser for the National Education Association's Department of Audio-Visual Instruction (see Holland's review, *CP*, September 1961, **6**, 319-21). This source book served the purpose of bringing together nearly all of the scattered and often inaccessible literature up to mid-1960. Even before it was off the press, however, TM&PL no longer represented the wave front of the by then current state of the art, however completely it may have summarized historical origins and major directions in the ground swell of the programed instruction movement. At the time TM&PL appeared, only a handful of completed auto-instructional programs were available, and only one or two of these were on the commercial market. Also, the teaching machines it described were, with one or two exceptions, experimental models or museum pieces. And the stream of experimental studies which has since emanated from many laboratories was as yet only a trickle. Evidently a further source book is needed if the outpouring of new literature is to be contained; a supplement to TM&PL to help meet this need is in prospect, planned for publication by the National Education Association probably in mid-1963.

Along with a number of published articles in the *Audio Visual Communication Review*, *Psychological Reports* and other journals, several books (including several popular "primers") and numerous multilithed or mimeographed reports, bound and unbound, have appeared in the past two years. Some of these, as well as numerous auto-instructional programs for use in teaching machines or in book form, have been reviewed or will shortly be reviewed in *CP*. Pending fuller review, brief annotations on some of the recent general publications on teaching machines and programed instruction are presented here for the information of *CP's* readers. Some recently published research reports and programs of interest to psychologists will be listed in a subsequent issue. The reader's attention is also invited to the series of abstracts which have appeared, in several recent issues of the *Audio-Visual Communication Review*, on completed research projects sponsored by the Educational Media Branch of the U.S. Office of Education under the provisions of Title VII of the National Defense Education Act; these deal both with research on programed instruction in the more specific sense and with other research on educational media (films, instructional television, etc.).

SUSAN MEYER MARKLE. *A Programed Primer on Programing: Volume II*. The Center for Programed Instruction, Inc., 365 West End Avenue, New York 24, New York.

This 40-page, 205-frame programed book is a sequel to the first *Programed Primer on Programing* (now revised and referred to as "Volume I") which was reviewed by Della-Piana in the February, 1962, issue of *CP* (pp. 64-68). Whereas the first volume dealt with general concepts of programed instruction, this second volume goes further into specific techniques and procedures in the construction of programs. Several chapters deal with formal and thematic prompts, elicitation of new responses, design of program sequences, and development of concepts—all presented in programed form in the linear, write-in (Skinner type) style.

DAVID CRAM. *Explaining "Teaching Machines" and Programming*. San Francisco: Fearon Publishers, 1961. Pp. vii + 86. $2.00.

The author, who is with the Division of Audio-Visual Services of San Jose State College, presents an exposition of programing methods and presentation devices. The book's format is that of a Crowder-type "scrambled book," though a 16-page example is also given illustrating the linear, constructed-response form of programing. Photographs of a dozen or so commercially produced teaching machines are included. Something is said of the philosophy of programed instruction, but the author refrains from trying to give definitive judgments within the current state of the art.

ROBERT F. MAGER. *Preparing Objectives for Programmed Instruction*. San Francisco: Fearon Publishers, 1961. Pp. xii + 62, paperback. $1.75.

This is a programed book about programing or, more specifically, about the development of objectives for programs in terms of criterion behavior expected of the student. The book itself is in modified scrambled-book form, following the general style developed by Crowder. It does not deal with philosophy or technique of programing, nor with which objectives should be selected nor who should select them, but rather with how to state objectives in behavioral terms. Rationale: if you don't know exactly where you are going you may end up somewhere that you didn't intend to be. The author is Senior Scientist of the Behavioral Science Project, Varian Associates, in Palo Alto, California.

LAWRENCE M. STOLUROW. *Teaching by Machine*. Washington, D. C.: U. S. Department of Health, Education, and Welfare, 1961. (OE-34010, Cooperative Research Monograph No. 6; for sale by the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C.) Pp. vi + 173, paperback. $0.65.

This monograph was prepared in connection with research projects under the author's direction at the University of Illinois. It discusses current instructional problems and some approaches to their solution, particularly through the use of auto-instructional programs and devices, and with emphasis on a "systems approach." A dozen or so of the more familiar experimental teaching machines are illustrated by line drawings, and the construction and operation of a number of machines is described in terms of an 8-point schema for classifying machine functions. Concepts relating to teaching machines and programing are discussed in relation to the learner, and the programing process is dealt with at some length. Several programing principles are related to variables and paradigms that entered into the author's earlier research on instructional problems in military training. Research findings and problems for research are discussed.

CHARLES I. FOLTZ. *The World of Teaching Machines*. Washington, D. C.: Electronic Teaching Laboratories. (Library of Congress Catalog Card No. 61-17233). Pp. iv + 116, paperback. $5.95.

Although the publisher has issued the information contained in this volume in book form, it provides only an interim survey, and much of its contents will quickly become increasingly out of date. The book, amply illustrated with photographs of teaching machines in use, deals with programed-learning philosophy, programing techniques, devices, problems and recommendations. Appendices include an incomplete listing of program sources and research projects. (For a more complete and up-to-date survey, see Finn and Perrin, below.)

JOSEPH W. RIGNEY and EDWARD B. FRY. *Current Teaching Machine Programs and Programming Techniques*. Washington, D. C.: National Education Association, Department of Audio-Visual Instruction. Pp. 119, paperback. $2.00.

This publication, which comprises Supplement 3 (Vol. 9, No. 3; May-June, 1961) of the *Audio-Visual Communication Review*, is the second such supplement dealing exclusively with programed instruction. (The first, an annotated bibliography by E. B. Fry, G. L. Bryan, and J. W. Rigney, can be considered as superseded by the later publications, including the more extensive annotated bibliography contained in the Lumsdaine-Glaser source book.) According to the authors, "This report is a survey of teaching-machine programs and programming techniques as they existed at the end of 1960." Rigney and Fry describe types of programs produced through 1960 in terms of content and educational level, offer definitions of some common terms, and summarize some proposed programing rules and techniques. The most extensive section of the report is the 84 page section which presents excerpts from 81 programs (62 constructed response, 19 multiple-choice) on a wide variety of topics. Most of these are non-commercial research programs, but a number of examples are also given from programs available for sale. The excerpts of a few frames each come from programs ranging up to several thousand frames in length. As the authors say, "they indicate something of the diversity of this new art."

JAMES D. FINN and DONALD G. PERRIN. *Teaching Machines and Programed Learning, 1962: A Survey of the Industry*. Occasional Paper No. 3, N.E.A. Technological Development Project. Washington, D. C.: National Education Association, 1961. $1.50.

This is a spiral-bound, multilithed publication which the authors present as an interim report of what is currently happening in a very fast-moving and rapidly expanding field. The major concentration in this comprehensive report is on present commercial developments and possible future trends. Data for the report came from an extensive questionnaire survey of manufacturers and publishers. Sources of programs, manufacturers of devices, and lists of programs now available or presumably soon to be available for sale are given in directory form. About thirty pages are devoted to a survey of trends, about 15 pages to photographs and capsule descriptions of some six dozen commercially produced teaching machines, and about 20 pages to a listing of some six hundred commercially produced programs. Of the latter, classified in nine broad subject-matter areas, nearly 300 are reported as available in 1961, the remainder indicated as being available during 1962. Intended level (elementary to college) and number of frames (ranging from less than 20 to over 8,000) are given for some of the programs listed. The directory of suppliers gives addresses of about 100 sources that either manufacture some form of teaching machine, publish some sort of programs, or both.

—A. A. LUMSDAINE

Instead of visiting the sins of the fathers on the children, one visits the sins of the children on the fathers.

—MARGERY SHARP

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ON THE OTHER HAND

In this Department CP *invites discussion of reviews and of books reviewed. Here is the place for that kind of intellectual dissent that promotes progress in understanding. Let your criticism be* ad verbum, *not* ad hominem. *Seldom does a criticism merit more than half the space of the text criticized—never more than equal space and then only when the letter is interesting and well written.* CP *edits letters when it thinks they should be. Single-spaced letters will be returned for double-spacing.*

FACE EVIDENCE: ABJURE TAFFY

Rogosin's review of Gardner Murphy's *Challenge of Psychical Research* (*CP;* Jan. 1962, **7**, 14-15) does not come to grips with the main intention of the book. The reviewer's central theme is Murphy's kind of belief in parapsychological phenomena versus Rogosin's particular brand of disbelief. True, Gardner Murphy states very frankly what he believes, doubts or disbelieves, but this constitutes a very minor, unemphasized part of the publication. The whole organization of the book is just the opposite of an effort to 'sell' beliefs, being primarily a presentation of research reports (including procedures, photos of apparatus, results with accompanying tables, etc.). It comes close to being an anthology of research publications which would otherwise be obscured in little-known parapsychological journals. Direct quotations of eighteen papers take up 206 out of 291 pages in the book. Yet the review completely disregards this fundamental feature.

The author's attitude in fact shows just the opposite of the soft judgment and impassioned belief depicted in the review. It is based on the stated purpose: "I have decided to try to show what psychical research is by giving *documented examples of the kind of data available* in relation to a few main kinds of problems . . . My aim is to offer exhibits of data; to suggest ways in which the data may be interpreted; and to leave the reader to decide—or to decide not to decide—what to make of it all. He may decide: 'It's all rubbish.' He may decide: 'It could be; but who knows?' He may decide: 'Here is an area that calls for more and better research.'" (pps. 5-6)

The review also charges that Murphy's scientific presentation failed to take account of such unscientific publications as those by a magician, Joseph Rinn, and by D. H. Rawcliffe, a very inaccurate amateur in the field. Rinn's book is really only a magician's bag of tricks, mixing personal memories, fiction and outright untruths: for instance he describes nonexistent research sessions, using direct quotes. Though honest, informed criticism is always to be desired, unscientific accounts like Rinn's and Rawcliffe's have no place in a book which is (to use Rogosin's words) a "primer intended as a guide for scientists and laymen alike."

Murphy puts forth this material not for uncritical acceptance but as a challenge for open-minded consideration. Belief or no belief, *CP's* readers are entitled to know that there is finally available a short anthology of research in parapsychology presented and commented upon by a psychologist of great probity.

KARLIS OSIS
Parapsychological Foundation, Inc.

A primary sin of parapsychologists is apparently held by many to be that they do not offer hardnosed material in sufficient detail to permit objective assessment and criticism.

The primary difficulty, however, is to get people to study and criticize the research published.

It would be fine to see a discriminately critical review of the factual materials presented in *Challenge of Psychical Research: A Primer of Parapsychology*. The review by Rogosin has many nice personal words to say about me, but does not offer the privilege of any critical comments at all on any specific factual materials presented in the book. I can't help wondering whether he tried to find something wrong and couldn't, or whether he thought it was so evidently a wrong thing to believe in the possibility of parapsychological phenomena that he had no obligation to present any of the various classes of evidence offered. This was disappointing to me. I wonder also whether, when he (and indeed the editor, too) thinks that I am such a generous person that I let underdogs get away with most anything, this has any relevance to scientific jobs facing us. I could get along with less taffy in exchange for having a critical review of efforts in this field.

GARDNER MURPHY
The Menninger Foundation

UNFAIR ATTRIBUTION?

I wish to protest vehemently against some serious distortions by your reviewer of my book, *Psychology of Personality*. (*CP*, Jan. 1962, **7**, 1-3) He mistakenly and unfairly attributes to my book a protest against "the deadening routine of repeating and recapitulating and confirming the same impoverished views of man that have been appearing in most of our publications in the past forty years" and that these words accurately summarize the tone and tenor of the book. The quoted words do not appear in my book, but are excerpts from page 2 of my letter of June 28, 1961, concerning myself which I wrote to the reviewer at his request. From the letter he draws the conclusion, also not present in my book, that I have no respect for "the knowledge already acquired by men who are neither knaves, fools, nor cowards, as Bonner often implies."

Frankly, this comes close to yellow journalism.

HUBERT BONNER
Ohio Wesleyan University

LEONT'EV AND ZAPOROZHETS NOT LOST

In the January issue of *Contemporary Psychology* (which looks fine), you mention Professors Leont'ev and Zaporozhets.

You say you do not know who they are. (*CP*, Jan. 1962, **7**, 19-20)

We happened to meet both of them when we were in the Soviet Union last May. Professor A. N. Leont'ev is Vice President of the Academy of Pedagogical Sciences of RSFSR. Professor A. V. Zaporozhets is Director of the Institute of Pre-School Education, Academy Of Pedagogical Sciences, Pogodinka 8, Moscow.

JAMES G. MILLER
University of Michigan

They are actually two of the most distinguished and best known figures in contemporary Russian psychology. Most of the numerous members of the APA who have visited the USSR in recent years must have met them and would have been able to supply information about them.

Professor Leont'ev is the head of the department (or 'Chair') of psychology at Moscow University at 11 Mokhovaia Street.

DANIEL E. BERLYN
University of Toronto

* Someone must have been pulling your leg about Leont'ev and Zaporozhets. These two are well known in the Soviet psychological world. I remember meeting them at the International Congress of Psychology in Montreal (1954). They certainly are not hard to find. As a matter of fact, both of them are listed in the *International Directory of Psychologists!*

IVAN D. LONDON
Institute of Political Psychology in Communist Societies

Fie on CP. *And fie on Pergamon Press for misleading the reviewer.* CP *has ordered a copy of* The International Directory of Psychologists.

—F.H.S.

WHICH DREVER?

Professor Drever's gentlemanly protest deserves, and hereby elicits, a humble apology from me. The fact that he will undoubtedly accept it graciously does not in any way mitigate my feelings of guilt about having misrepresented him. I was the "puzzled" reviewer of the book in question, and I shall wear a hair-shirt for some time to come.

By way of explaining, but not of excuse, I might mention the following. (1) The publisher, Philosophical Library, Inc., issued a *Sourcebook in Psychology* with a 1960 dateline and no reference anywhere to the fact that it was a slightly edited reissue of a much earlier volume. (2) The title page includes only one name, that of James Drever, and prints this in the place and type usually accorded the editor or author of a volume. The introductory chapter and one later chapter were ascribed to James Drever. In my innocence I concluded, as others have, that the editor was James Drever. (3) In the biographical notes James Drever was explicitly, and falsely, identified as the Drever who is now Professor of Psychology at the University of Edinburgh.

It seems to me that the Philosophical Library is guilty of irresponsibility that borders on fraud. This is not its first offense. (See *CP*, August 1958, **3**, p. 221.) Psychologists should keep this in mind as new publications appear. Fortunately Professor Drever's reputation is such that it will not be seriously impaired. Nevertheless, I apologize again. The Drever I know is "wise and not parochial": hence my evident embarrassment at having to write such a chilly review. I do not, however, retract the positive statements I made about the book. Whoever the original editor was, he made a good selection of classic items, many of which are likely to be unknown to the budding psychologist of today. For obvious reasons, I cannot now recommend that the book be purchased.

ROBERT B. MACLEOD
Cornell University

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